GUIDE TO EFFECTIVE USE OF SFD-10-01

The SFD and the associated SCD provide users with a simplified, systematic approach to understanding the operation of No. 5 crossbar. Reading through the following statements will acquaint you with unique features of these documents designed to help in clearing troubles and understanding the basic operation of No. 5 crossbar.

1. This Document is Organized by Type of Call (Volume 1 and 2) or by Type of Test (Volume 3).

   - Volume 1 covers dial tone, outgoing and incoming service calls. Volume 2 covers intraoffice, intermarker group and tandem service calls. Volume 3 covers test circuits.

   - The volumes will be updated periodically on an individual sheet reissue basis to keep them current.

   - Each section is identified by a group of tabs of one color (e.g., red tabs in volume 1 identify dial tone call). Each tab within a section covers a function within that task.

   - GO TO SECTION B and page from tab to tab. Note the overall function depicted in block diagram form on page B001.

   - Subsequent tabs (B101, B102, etc.) show how the block diagram is built with the function covered in that part shown in red.

2. Information Found in a Typical Part

   - PAGE THROUGH TAB B2. A given page usually shows the interconnection to several circuits. SEE B202.

   - Note the lack of options. Page options are used and are identified on each sheet. SEE B206. The option assignment in the SFD has no relationship to options shown in standard SD.

   - Interaction of the service circuit and test frame is shown. SEE B209. Notice the MTC control of OR selection on a test call compared to random selection on a service call.

- A major feature of the SFD is simplification of circuit paths and options. SEE C605. Note the operate path for the DIS1, 2 relays. It is shown as a straight path from ground. The simplification is evident if one refers to SD-26002-01 page B37 to find the operate path of the DIS1, 2 relays. SEE D705. Note the operate path of the DIS1, 2 relays on the incoming call. Again it is a straight line path, however, if you compare this path to the outgoing call on C605 you will notice the differences between the two types of calls.

- Several unique conventions are used. For example, a parenthesis around a contact indicates an option exist at this point that uses a different contact. GO TO B209. At coordinate G3, the ETS and OTS contacts are so designated. SFD PART A1 SHOULD BE READ CAREFULLY TO UNDERSTAND ALL CONVENTIONS.

3. Use of Trouble Analysis Flow Chart

   - Tab A2 provides a preliminary trouble analysis of a trouble card and is organized to direct the user to the section of the SFD which covers the area to be investigated.

   - TURN TO A202 AND A203. The use of the flow chart is explained in a detailed example in SCD A1-3.1.1. Note however, that the presence or absence of punches on the trouble record card leads the user through a series of yes/no questions. The response box would instruct the user to turn to the section of the SFD covering the particular call or test. For example, if the DTM punch is present at A202/B3, the user is directed to B002/B0.

   - The flowchart on B002 provides a detailed analysis and leads the user to the trouble analysis sequence chart on B003.

   - The trouble analysis sequence chart shows the sequence of trouble punches to allow the user to determine in which part of the regular sequence chart the trouble is located. FOR COMPLETE DESCRIPTION OF THIS PROCESS FOLLOW EXAMPLE IN SCD A1-3.1.1.

4. The Maintenance Tab Provides a Ready Reference to Establish a Specific Basic Test Applicable to This Section. TURN TO TAB B7

    - Pages B702-B707 show keys and switches which simulate a dial tone call and where the information will be found on the trouble record card.

    - Page B709 shows keys and switches which produce an ATA exception report.

    - Pages B710-B721 show keys and switches which are operated to perform DTM, OR and PTT class of test.

    IT IS NOT INTENDED THAT BSP TEST SECTIONS BE BYPASSED. FOR DETAILED EXPLANATION OF THIS PART SEE SCD-B7.

5. Tab A1 List General Information.

    - Tab A1 covers general description, information notes, symbols and connecting circuit index.

    - Identical information in tabs A0, A1 and A2 appear in all volumes for easy reference.

No. 5 CROSSBAR
SYSTEM FUNCTIONAL DIAGRAMS
SFD-10-01 VOL 3

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Bell Laboratories

SFD-10-01

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1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

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BC02

CROSSBAR SYSTEMS
NO 5

SYSTEM FUNCTIONAL DIAGRAMS

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1,274 SHEETS
238 OVERLAYS

BELL TELEPHONE LABORATORIES
INCORPORATED

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ISSUE 5
DWG SIZE 6S
SYSTEM FUNCTIONAL DIAGRAMS
SFD-10-01- A002
BELL LABORATORIES

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TEST FRAME SET-UP-ITNP CLASS OF TRUNK TEST	M402	5									
RESERVED	M403										
SEQUENCE CHART-ITNP CLASS OF TRUNK TEST	M404	5									
SEQUENCE CHART-ITNP CLASS OF TRUNK TEST	M405	5									
SEQUENCE CHART-ITNP CLASS OF TRUNK TEST	M406	5									
RESERVED	M407										
ITNP TRUNK TEST-ESTABLISHED TEST CONNECTION MTF	M408	5									
ITNP TRUNK TEST-ESTABLISHED TEST CONNECTION MTF	M409	5									
RINGING SWITCH CONNECTION-INCOMING CALL	M410	5									
PART M5 - INTERMARKER GROUP TRUNK TEST-IAO CLASS OF TEST	M501	5									
TEST FRAME SET UP-INTERMARKER GROUP TRUNK TEST	M502	5									
RESERVED	M503										
SEQUENCE CHART-INTERMARKER GROUP TRUNK TEST-IAO CLASS OF TEST	M504	5									
SEQUENCE CHART-INTERMARKER GROUP TRUNK TEST-IAO CLASS OF TEST	M505	5									
SEQUENCE CHART-INTERMARKER GROUP TRUNK TEST-IAO CLASS OF TEST	M506	5									

CONTENTS	SHEET NO	ISSUE NO 5	6	7	8	9	10	11	12	13	14
RESERVED	M507										
INTERMARKER GROUP TRUNK TEST-ESTABLISHED TEST CONNECTION ON MTF	M508	5									
INTERMARKER GROUP TRUNK TEST-ESTABLISHED TEST CONNECTION ON MTF	M509	5									
RINGING SWITCH CONNECTION INTERMARKER GROUP CALL	M510	5									
PART M6 - OUTGOING TRUNK (TANDEM) TRUNK TEST-OUTGOING TRUNK CLASS OF TRUNK TEST	M601	5									
TEST FRAME SET UP-OUTGOING TRUNK (TANDEM) CLASS OF TEST	M602	5									
TEST FRAME SET UP-OUTGOING TRUNK (TANDEM) CLASS OF TEST	M603	5									
SEQUENCE CHART-OUTGOING TRUNK (TANDEM) CLASS OF TEST	M604	5									
SEQUENCE CHART-OUTGOING TRUNK (TANDEM) CLASS OF TEST	M605	5									
RESERVED	M606										
SEQUENCE CHART-OUTGOING TRUNK (TANDEM) CLASS OF TEST	M607	5									
OUTGOING TRUNK (TANDEM) CLASS OF TRUNK TEST-ESTABLISHED TEST CONNECTION ON MTF	M608	5									
OUTGOING TRUNK (TANDEM) CLASS OF TRUNK TEST-ESTABLISHED TEST CONNECTION ON MTF	M609	5									
PART M7 - INCOMING (TANDEM) TRUNK TEST-ITNP CLASS OF TRUNK TEST	M701	5									
TEST FRAME SETUP-ITNP CLASS OF TRUNK TEST (ITT)	M702	5									
RESERVED	M703										
SEQUENCE CHART-INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITT)	M704	5									
SEQUENCE CHART-INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITT)	M705	5									
SEQUENCE CHART-INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITT)	M706	5									
RESERVED	M707										
INCOMING (TANDEM) TRUNK TEST-ITNP CLASS OF TRUNK TEST ESTABLISHED TEST CONN MTF	M708	5									
INCOMING (TANDEM) TRUNK TEST-ITNP CLASS OF TRUNK TEST ESTABLISHED TEST CONN MTF	M709	5									
PART N0 - SUBSCRIBER LINE CLASS OF TEST	N001	5									
TEST FRAME SET-UP-SUBSCRIBER LINE CLASS OF TEST	N002	5									
RESERVED	N003										
SEQUENCE CHART-SUBSCRIBER LINE CLASS OF TEST	N004	5									
SEQUENCE CHART-SUBSCRIBER LINE CLASS OF TEST	N005	5									
SEQUENCE CHART-VOLTMETER TESTS SUBSCRIBER LINES OR TRUNKS	N006	5									
RESERVED	N007										
SUBSCRIBER LINE CLASS OF TEST-ESTABLISHED CONN TO VOLTMETER	N008	5									
VOLTMETER TEST ON SUBSCRIBER LINES OR TRUNKS	N009	5									
MASTER TEST FRAME TELEPHONE CIRCUIT CONN AND CONTROL	N010	5									
PART N1 - MARKER LINE VERIFICATION TEST	N101	5									
TEST FRAME SET-UP-MARKER LINE VERIFICATION TEST (MLV)	N102	5									
RESERVED	N103										
SEQUENCE CHART-MLV CLASS OF TEST	N104	5									
SEQUENCE CHART-MLV CLASS OF TEST	N105	5									
SEQUENCE CHART-MLV CLASS OF TEST	N106	5									
LINE VERIFICATION MATCH OR MISMATCH COMMON CONTROL RELAYS	N107	5									
NUMBER GROUP TRANSLATION	N108	5									
LINE VERIFICATION MATCH	N109	5									
LINE LOCATION CONTROL	N110	5									
20,30,60 CLASSES OF SERVICE LINE VERIFICATION TEST AND INPUT TO COMPLETING MARKER	N111	5									
100 CLASSES OF SERVICE LINE VERIFICATION TEST AND INPUT TO COMPLETING MARKER	N112	5									

ISSUE 5	DWG SIZE 6S	SYSTEM FUNCTIONAL DIAGRAMS
SFD-10-01-	A014	BELL LABORATORIES

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AMRST-TEST FRAME PREPARATIONS FOR PROGRESSIVE MONITORING, MONITORING OR, IR, OS, MONITORING A PARTICULAR IR, OS	P002	5									
AMRST-TEST FRAME PREPARATION FOR MONITORING A PARTICULAR OR	P003	5									
PART P1 - ESTABLISHING CONNECTION	P101	5									
SEQUENCE CHART-PROGRESSIVE MONITORING	P102	5									
SEQUENCE CHART-PROGRESSIVE MONITORING	P103	5									
SEQUENCE CHART-MONITOR ORIGINATING, INCOMING REGISTER ESTABLISHING CONNECTION	P104	5									
SEQUENCE CHART-MONITOR OUTGOING SENDER ESTABLISHING CONNECTION	P105	5									
SEQUENCE CHART-MONITOR PARTICULAR ORIGINATING REGISTER-ESTABLISHING CONNECTION	P106	5									
SEQUENCE CHART-MONITOR PARTICULAR INCOMING REGISTER, OUTGOING SENDER-ESTABLISHING CONNECTION	P107	5									
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MONITOR START AND ALLOTTER	P109	5									
INCOMING REGISTER CONTROL	P110	5									
MARKER CONTROL	P111	5									
MONITORING-SENDER AND REGISTER SELECTION	P112	5									
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SEQUENCE CHART-MONITOR ORIGINATING, INCOMING REGISTER, OUTGOING SENDER-DP-PULSE COUNTING	P203	5									
SEQUENCE CHART-MONITOR ORIGINATING REGISTER-TT-PULSE COUNTING	P204	5									
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AC SUPPLY, BIAS CONTROLLER AND NO VOLTAGE ALARM	P206	5									
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DIGIT REGISTRATION	P216	5									
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SYSTEM FUNCTIONAL DIAGRAMS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES
SFD-10-01-
A015

GENERAL DESCRIPTION OF SFD-10-01

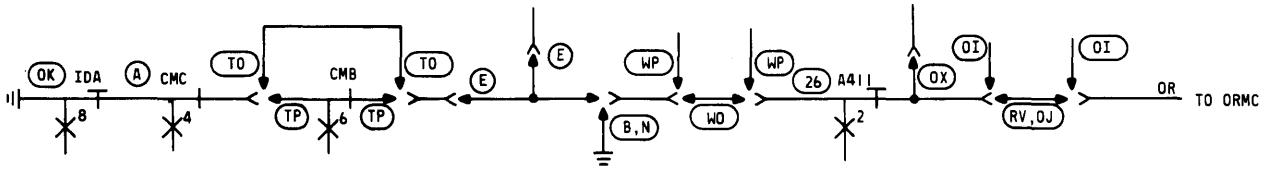
A MAJOR OBJECTIVE OF SFD-10-01 IS TO PORTRAY, IN SIMPLE FORM, THE SYSTEM SERVICE FUNCTIONS OF THE BASIC NO 5 CROSSBAR OFFICE, WIRE SPRING MARKER GROUP, WHICH PROVIDES POTS (PLAIN OLD TELEPHONE SERVICE). A FURTHER OBJECTIVE IS TO CORRELATE SERVICE FUNCTIONS WITH THE MAINTENANCE FACILITIES WHICH HAVE BEEN PROVIDED TO AID IN DETECTING, ANALYZING, LOCATING, AND CLEARING TROUBLE CONDITIONS.

SFD-10-01 IS DIVIDED INTO A NUMBER OF SECTIONS, EACH OF WHICH EXCEPT FOR SECTION "A", DESCRIBES A SPECIFIC JOB PREFORMED BY NO 5 CROSSBAR. EACH SECTION IS DIVIDED INTO PARTS WHICH DESCRIBE THE MAJOR STEPS OR OPERATIONS THROUGH WHICH THE SYSTEM PROCEEDS TO PERFORM THE JOB.

SD VERSES SFD

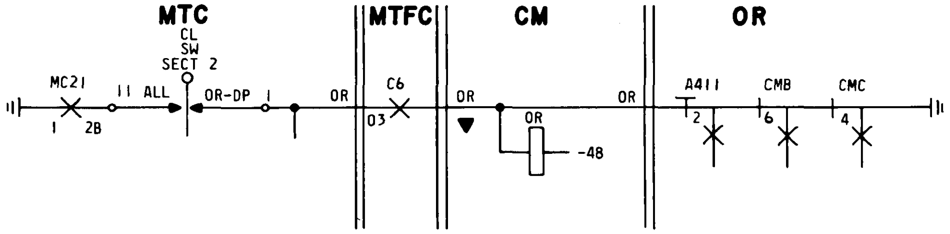
THE TWO SKETCHES SHOWN BELOW ARE USED TO ILLUSTRATE THE SD AND SFD METHODS OF SHOWING THE GROUNDING OF THE OR LEAD. AS ILLUSTRATED, THE SD ARRANGEMENT SHOWS ALL POSSIBLE OPTIONS WHEREAS THE SFD SHOWS A SIMPLIFIED, LESS OPTIONAL PATH. WHERE COMPLEX CIRCUITRY IS INVOLVED, IT MAY BE NECESSARY FOR THE MAINTENANCE PERSON TO REFER TO THE SD DRAWING.

STANDARD SD ARRANGEMENT (OR CKT)



OPTIONS USED IN SFD	SD APPARATUS/ WIRING	CIRCUIT NOTES
✓	26	NUMBERING PLAN AREA TRANSLATOR (MD 45D).
✓	A,E,WO	REQUIRED FOR PRETRANSLATION OF REGULAR OR REGULAR AND IDDD CODES
	B,N,WP	PRETRANSLATORS NOT REQUIRED.
	OI,OJ,OK,OX	IDDD REQUIRED.
✓	RV	IDDD NOT REQUIRED.
	TO	WHERE THE REGISTER IS NOT ARRANGED FOR PRT AND.
		INTERCHANGEABLE NPA AND LOCAL AREA CODE.
✓	TP	WHERE THE REGISTER IS ARRANGED FOR PRT AND
		INTERCHANGEABLE NPA AND LOCAL AREA CODE.

SFD ARRANGEMENT



GENERAL DESCRIPTION

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES
SFD-10-01-
A101

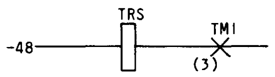
SFD-10-01-A101

INFORMATION NOTES

CONTACTS IN PARENTHESIS

PARENTHESIS ARE USED AROUND CONTACTS TO ALERT THE USER THAT AN OPTIONAL ARRANGEMENT EXISTS. THE CONTACT ARRANGEMENT SHOWN IN SFD-10-01 ISSUE 4, IS THE ARRANGEMENT MOST LIKELY PROVIDED IN THE MAJORITY OF NO. 5 CSBR OFFICES.

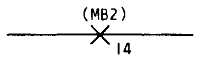
EXAMPLE



RELAYS IN PARENTHESIS

PARENTHESIS ARE USED AROUND RELAY DESIGNATIONS TO ALERT THE USER THAT AN OPTIONAL ARRANGEMENT EXISTS. THE RELAY DESIGNATION SHOWN IN SFD-10-01 ISSUE 4, IS THE RELAY MOST LIKELY PROVIDED IN THE MAJORITY OF NO. 5 CSBR OFFICES.

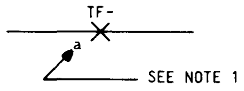
EXAMPLE



NUMEROUS OR COMPLEX CONTACT ARRANGEMENT

WHEN CONTACTS ARE TOO NUMEROUS OR THE ARRANGEMENT TOO COMPLEX, A LOWER CASE LETTER AND NOTE DIRECT THE USER TO THE SCHEMATIC DRAWING FOR THE CONTACT ARRANGEMENT.

EXAMPLE



SHEET NOTES:

1. a - SEE SD-26002-01, FS 24, FOR CONTACT ARRANGEMENT.

OPTION ASSIGNMENTS

SHEET OPTION ASSIGNMENTS Ⓐ THRU Ⓜ WILL ALWAYS BE THE SAME THROUGHOUT THE SFD-10-01 DOCUMENT. OPTIONS Ⓝ THRU Ⓩ WILL VARY AND WILL PERTAIN ONLY TO THE SHEET WHERE THE OPTION APPEARS.

Ⓐ 2X TROUBLE CARD;SD-27718-01
Ⓑ 1X TROUBLE CARD, SINGLE SIDED;SD-25805-01, TABLE 1
Ⓒ 1X TROUBLE CARD, DOUBLE SIDED;SD-25805-01, TABLE 1A
Ⓓ TRIPLE TRUNK LINK FRAME
Ⓔ PAIRED TRUNK LINK FRAME
Ⓕ NON PAIRED LINE LINK FRAME
Ⓖ PAIRED LINE LINK OPERATION
Ⓗ TRUNK LINK; SD-26032-01
Ⓙ 30 CLASSES OF SERVICE
Ⓚ 60 CLASSES OF SERVICE
Ⓛ 100 CLASSES OF SERVICE
Ⓜ TRUNK LINK;SD-27879-01
(STD) STANDARD ARRANGEMENT
(MD) MANUFACTURE DISCONTINUED ARRANGEMENT
(A&M) ADDITIONS AND MAINTENANCE ONLY ARRANGEMENT

SEQUENCE CHARTS FOUND IN SFD-10-01 VOL III

SEQUENCE CHARTS SHOWN IN SFD-10-01 VOL III COVER OPERATIONS FOUND IN SD-27718-01, TABLE 1. FUNCTIONAL SCHEMATIC PAGES INCLUDE SD-25805-01, TABLE 1 AND 1A; AND SD-27718-01, TABLE 1.

DOUBLE LINE BOXES ON SEQUENCE CHARTS

DOUBLE LINE BOXES:

1. ARE ALWAYS REFERENCE TO ANOTHER PART (NOT CIRCUIT).
2. IF SHOWN AS J1, THEN THE ENCLOSED SC IS COMPLETE AND ACCURATE FOR THE TYPE TEST BEING COVERED (EXAMPLE: OGT M004)
3. IF SHOWN AS K103 (ON PAGE M005), THEN ANY DETAIL INSIDE IS:
   (A) REPEAT OF DETAIL FOUND ON K103 THAT IS IMPORTANT TO OGT TEST, AND
   (B) DETAIL THAT TAKES PLACE IN THE "TIME FRAME" OF THE K103 SEQUENCE CHART AND FOR WHICH THE RELAYS SHOWN IN THE SC ARE ILLUSTRATED IN K1 PART.

A SECTION

A0 - VOL I,II,III
A1 - VOL I,II,III
A2 - VOL I,II,III
A3 - VOL I
A4 - VOL I
A5 - VOL II
A6 - VOL II
A7 - VOL III
A8 - VOL III

ISSUE
5

SFD-10-01-A102

INFORMATION NOTES

DWG SIZE 6S

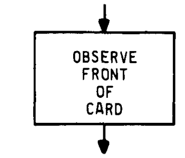
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

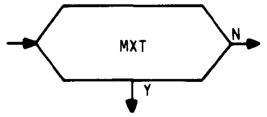
E-7421-L (4-73)

FLOW CHARTS

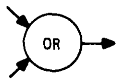
SYMBOLS USED IN FLOW CHARTS ARE AS FOLLOWS:



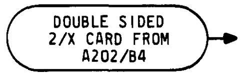
INSTRUCTION AND/OR INFORMATION BLOCK.



DECISION BLOCK - IS MXT DESIGNATION PUNCHED ON TROUBLE CARD N = NO, Y = YES



PROCEED THROUGH FROM EITHER INPUT.

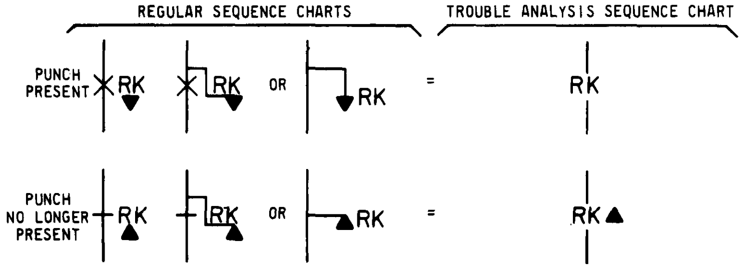


INPUT FROM ANOTHER LOCATION

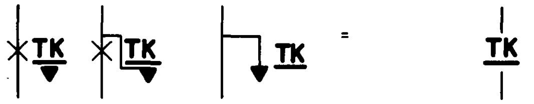
TROUBLE ANALYSIS SEQUENCE CHARTS

TROUBLE ANALYSIS SEQUENCE CHARTS SHOW SEQUENCE ONLY OF THE OCCURENCE OF PUNCHED TROUBLE RECORD DESIGNATIONS. THIS IS ALL THAT NEED BE OF CONCERN IN ANALYZING A CARD. THE TROUBLE ANALYSIS SEQUENCE CHART CROSS REFERENCES TO PAGES OF THE REGULAR SEQUENCE CHARTS FOR TROUBLE LOCATING PURPOSES.

THE FOLLOWING METHOD OF SHOWING SEQUENCE OF TROUBLE PUNCHES IS USED IN SFD:



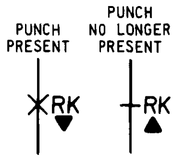
KEY PROGRESS INDICATION POINTS ARE SHOWN IN BOLD LETTERING WITH A HEAVY UNDERLINE FOR EASE IN LOCATING.



SEQUENCE CHARTS

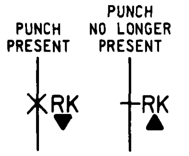
STANDARD SYMBOLS HAVE BEEN USED IN DETACHED CONTACT DRAWINGS AND SEQUENCE CHARTS PER BSP 005-109-101 EXCEPT AS FOLLOWS:

STANDARD (SD)

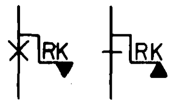


INDICATES THAT RK DESIGNATION IS PUNCHED EITHER FROM THE SAME SOURCE THAT OPERATED THE RK RELAY OR FROM A CONTACT CLOSURE OF THE RK RELAY.

PROPOSED STANDARD USED IN SFD

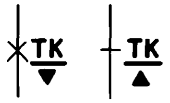


INDICATES THAT RK DESIGNATION IS PUNCHED FROM A CONTACT CLOSURE OF THE RK RELAY.

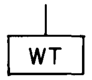


INDICATES THAT RK DESIGNATION IS PUNCHED FROM THE SAME SOURCE THAT ENERGIZED THE RELAY WINDING.

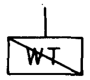
KEY PROGRESS INDICATION POINTS ARE SHOWN IN BOLD LETTERING WITH A HEAVY UNDERLINE FOR EASE IN LOCATING.



TIMING FUNCTIONS ARE DESIGNATED



INDICATES THE START OF A TIMING CIRCUIT



INDICATES A TIMING CIRCUIT HAS STOPPED

ISSUE 5

SYMBOLS

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

PRINTED IN U.S.A.

SFD-10-01-A103

CONNECTING CIRCUIT INDEX

ABBR	TITLE		SD-
5A TM	5A TIMER CKT		99304-01
-	KEY SHEET		25760-01
AA	AISLE ALARM		25671-01
AC-C3	AC CURRENT SUPPLY		
ALL	AUXILIARY LINE LINK		27719-01
ALM	ALARM		25671-01
ALMR	ALARM RECEIVING		95418-01
ALMS	ALARM SENDING		95417-01
AMB	ALL MARKERS BUSY		25695-01
AMRST	AUTOMATIC MONITOR,REGISTER, AND SENDER TEST (MASTER TEST FRAME)		25680-01
APTT	AUTOMATIC PROGRESSION TRUNK TEST		25938-01
BC	BATTERY CONTROL		81121-01
CM	COMPLETING MARKER		26002-01
CNS	COIN SUPERVISORY		25736-01
CSL	COIN SUPERVISORY LINK		26049-01
DTM	DIAL TONE MARKER		26001-01
DTTDC	DT TIME DELAY CONTROL		94820-01
GB	GROUP BUSY		25795-01
IAO	INTRAOFFICE TRUNK		26060-01
IMGS	INTERMARKER GROUP SENDER		25826-01
IMGT	INTERMARKER GROUP TRUNK		26141-01
IR	INCOMING REGISTER	MF	26042-01
		DP	26041-01
IRL	INCOMING REGISTER LINK		26048-01
IRMC	INCOMING REGISTER MARKER CONNECTOR	MKR	26025-01
		REG	26026-01
IT	INCOMING TRUNK		26070-01
IT SW	INCOMING TRUNK SW		95500-01
ITT	INCOMING TANDEM TRUNK		26071-01
	INCOMING TANDEM TRUNK (BYLINK)		26077-01
JGF	JUNCTOR GROUPING FRAME		-
JLK	JACK,LAMP, AND KEY (MASTER TEST FRAME)		25762-01

ABBR	TITLE		SD-
LINE	COIN,TWO PARTY AND INDIVIDUAL		-
LIT	LINE INSULATION TEST		95537-01
LITC	LINE INSULATION TEST CONTROL		25796-01
LL	LINE LINK FRAME		26030-01
LLC	LINE LINK CONNECTOR		26031-01
LLDC	LINE LOAD CONTROL		96387-01
LLMC	LINE LINK MARKER CONNECTOR		26022-01
LV	LINE VERIFICATION		26181-01
M-AMPL	MONITOR AMPLIFIER		96516-01
MDF	MAIN DISTRIBUTING FRAME		-
MFCS	MULTIFREQUENCY CURRENT SUPPLY		95391-01
MFSR	MULTIFREQUENCY SIGNAL RECEIVING		95536-01
MISC	MISCELLANEOUS FOR ALL FRAMES		25574-01
MTC	MASTER TEST CONTROL		25800-01
MTFC	MASTER TEST FRAME CONNECTOR	STD	27718-01
		MD	25805-01
MTMG	MASTER TIMER		25633-01
MTRC	MASTER TRAFFIC CONTROL		26020-01
MW SUP	2A SENDING PANEL		95000-01
	MILLIWATT DISTG CKT		95277-01
NG	NUMBER GROUP		26034-01
NGC	NUMBER GROUP CONNECTOR		26035-01
NTC	NO TEST CONNECTOR		25702-01
OSGR	OUTGOING SENDER GROUP RELEASE		26055-01
OGT	OUTGOING TRUNK		26085-01
OGIT	OUTGOING INFORMATION TRUNK		26144-01
OGT.JK	OUTGOING TRUNK TEST FR,TST AND MB JK		96376-01
OGTT	OUTGOING TRUNK TEST		95476-01
OI	OFFICE INTERRUPTER (60 OR 120 IPM)		25814-01
OR	ORIGINATING REGISTER		26040-01
ORMC	ORIGINATING REGISTER MARKER CONNECTOR	MKR	26023-01
		REG	26024-01
ORLM	ORIGINATING REGISTER LINE MEMORY	OR	26040-01
		TLC	26033-01
		ORMC	26024-01
OS	OUTGOING SENDER	MF	26051-01
		DP	26050-01
OSC	OUTGOING SENDER CONNECTOR	MKR	26059-01
		SDR	26057-01
OSL	OUTGOING SENDER LINK		25734-01
OT & P	OPERATOR TELEPHONE AND POSITION CKT		95502-01
PC	PREFERENCE CONTROL	LLMC,ORMC,IRMC	26029-01
PCMB	PREFERENCE CONTROL AND MAKE BUSY	LLC,OSC,TLC,NGC	26039-01
P-REG	PLANT REGISTER		25793-01
PRF	PERFORATOR		-

ABBR	TITLE		SD-
PRT	PRETRANSLATOR		25568-01
PRTC	PRETRANSLATOR CONNECTOR	PRT	25569-01
		REG	26038-01
PRTD	POWER,RING AND TONE DISTRIBUTION FRAME		25599-01
RCD	RECORDER (AUTOMATIC MESSAGE ACCOUNTING)		25872-01
REV	REVERTING CALL TRUNK		26068-01
RPTR	REPEATER		-
RSW	RINGING SWITCH		26080-01
SR	SIGNAL RECEIVER (MF)		95536-01
ST	SENDER TEST CKT		25675-01
STS	SENDER TEST SET		25674-01
TKL	TELEPHONE, KEY AND LAMP		25744-01
TL	TRUNK LINK	OPT H	26032-01
		OPT M	27879-01
TLC	TRUNK LINK CONNECTOR		26033-01
TN,GN	TONE GENERATOR CKT		99303-01
TP	TRUNK PREFERENCE		95501-01
TR	TROUBLE RECORDER		-
TRC	TROUBLE RECORDER CONTROL AND TEST		25572-01
T-REG	TRAFFIC REGISTER		25892-01
TRK	TRUNK		-
TRNSL	TRANSLATOR (AUTOMATIC MESSAGE ACCOUNTING)		26019-01
TS	TEST SET		
TT	TRUNK TEST (MASTER TEST FRAME)		25918-01
TT REG	TRUNK TEST REGISTER		27643-01
T-TERM	TEST TERMINATION		96540-01
TTL	TRANSMISSION TEST LINE		98100-01
TTR	"TOUCH-TONE" CALLING RECEIVING CIRCUIT-TYPE A2,ISSUE 1-4		95287-01
	"TOUCH-TONE" CALLING RECEIVING CIRCUIT-TYPE A3,POST ISSUE 5		98148-01
TTSTR	"TOUCH-TONE" STATION TEST RECEIVER-TYPE E1		98150-01
TUR	TRAFFIC USAGE RECORDER		95738-01
TV	TRANSVERTER (AUTOMATIC MESSAGE ACCOUNTING)		25591-01
TVC	TRANSVERTER CONNECTOR (AUTOMATIC MESSAGE ACCOUNTING)		26021-01
VM TST	MTF VOLTMETER TEST CKT		25792-01

ISSUE
5

SFD-10-01-A104

CONNECTING CKT INDEX

PRINTED IN U.S.A.
DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

E-3481-L (4-73)

ESTABLISHING NO. 5 CROSSBAR CONNECTIONS

INDEX

PAGE NO.	TITLE
A201	NO. 5 CROSSBAR FLOW CHARTS
A202	DOUBLE SIDED 2/X TROUBLE CARD (E5488) FLOW CHART INDEX FOR ANALYSIS
A203	DOUBLE SIDED 2/X TROUBLE CARD
A204	DOUBLE SIDED 1/X TROUBLE CARD (E4393) FLOW CHART INDEX FOR ANALYSIS
A205	DOUBLE SIDED 1/X TROUBLE CARD
A206	SINGLE SIDED 1/X TROUBLE CARD (E3638) FLOW CHART INDEX FOR ANALYSIS
A207	SINGLE SIDED 1/X TROUBLE CARD

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE 5

NO. 5 CROSSBAR FLOW CHARTS

SFD-10-01-A201

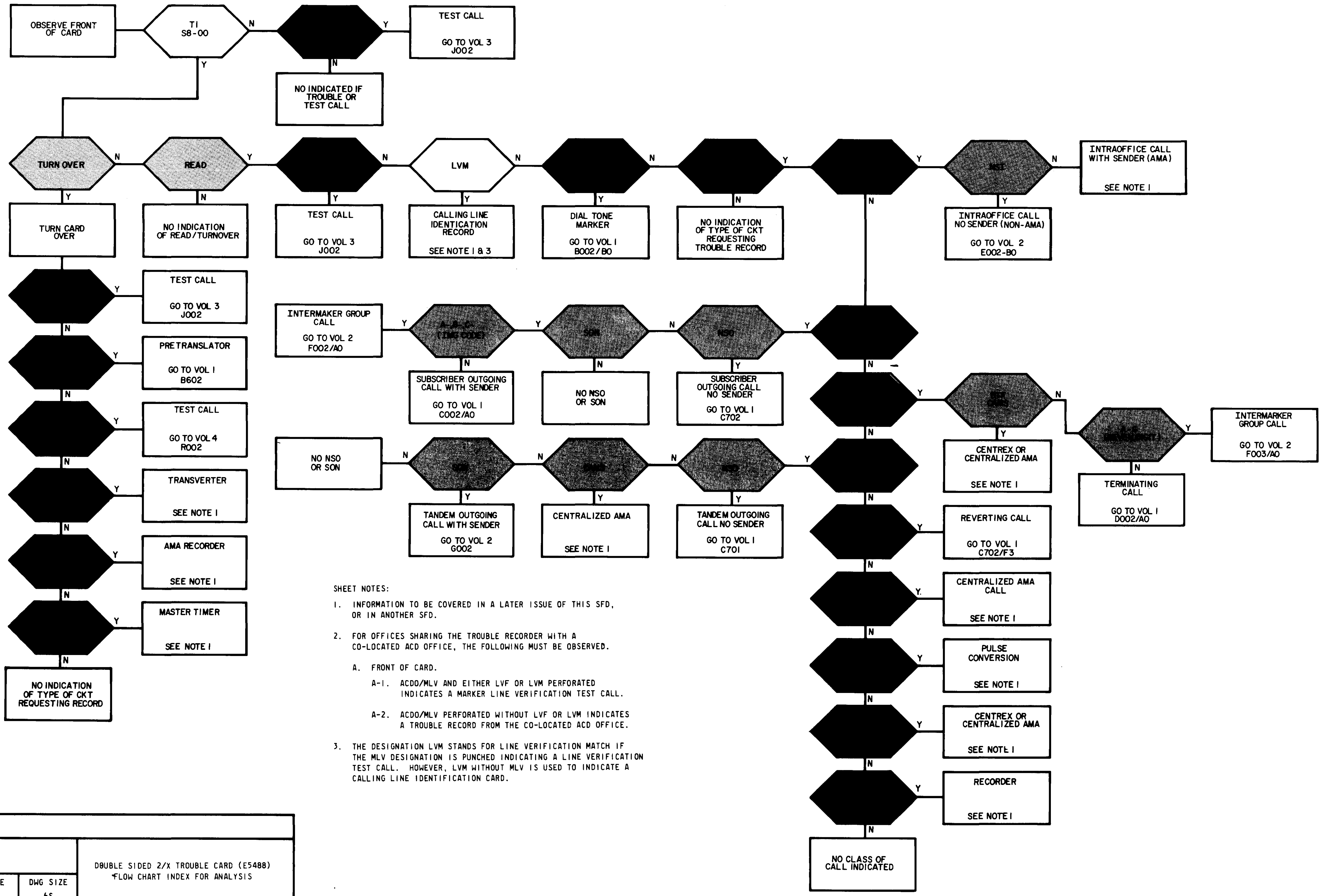
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

E-7481 (10-71)

FLOW CHART
DOUBLE SIDED 2/X TROUBLE CARD


OBSERVE FRONT OF CARD
TI S8-00
N
Y
TEST CALL GO TO VOL 3 J002
NO INDICATED IF TROUBLE OR TEST CALL
TURN OVER
READ
LVM
NSI
INTRAOFFICE CALL WITH SENDER (AMA) SEE NOTE 1
TURN CARD OVER
NO INDICATION OF READ/TURNOVER
TEST CALL GO TO VOL 3 J002
CALLING LINE IDENTICATION RECORD SEE NOTE 1 & 3
DIAL TONE MARKER GO TO VOL 1 B002/B0
NO INDICATION OF TYPE OF CKT REQUESTING TROUBLE RECORD
INTRAOFFICE CALL NO SENDER (NON-AMA) GO TO VOL 2 E002-B0
TEST CALL GO TO VOL 3 J002
PRETRANSLATOR GO TO VOL 1 B602
TEST CALL GO TO VOL 4 R002
TRANSVERTER SEE NOTE 1
AMA RECORDER SEE NOTE 1
MASTER TIMER SEE NOTE 1
NO INDICATION OF TYPE OF CKT REQUESTING RECORD
INTERMAKER GROUP CALL GO TO VOL 2 F002/A0
A.B.C. (IMG CODE)
SON
NSO
SUBSCRIBER OUTGOING CALL WITH SENDER GO TO VOL 1 C002/A0
NO NSO OR SON
SUBSCRIBER OUTGOING CALL NO SENDER GO TO VOL 1 C702
NO NSO OR SON
TANDEM OUTGOING CALL WITH SENDER GO TO VOL 2 G002
CENTRALIZED AMA SEE NOTE 1
TANDEM OUTGOING CALL NO SENDER GO TO VOL 1 C701
CENTREX OR CENTRALIZED AMA SEE NOTE 1
INTERMARKER GROUP CALL GO TO VOL 2 F003/A0
TERMINATING CALL GO TO VOL 1 D002/A0
REVERTING CALL GO TO VOL 1 C702/F3
CENTRALIZED AMA CALL SEE NOTE 1
PULSE CONVERSION SEE NOTE 1
CENTREX OR CENTRALIZED AMA SEE NOTE 1
RECORDER SEE NOTE 1
NO CLASS OF CALL INDICATED

SHEET NOTES:

1. INFORMATION TO BE COVERED IN A LATER ISSUE OF THIS SFD, OR IN ANOTHER SFD.

2. FOR OFFICES SHARING THE TROUBLE RECORDER WITH A CO-LOCATED ACD OFFICE, THE FOLLOWING MUST BE OBSERVED.

   A. FRONT OF CARD.

      A-1. ACDO/MLV AND EITHER LVF OR LVM PERFORATED INDICATES A MARKER LINE VERIFICATION TEST CALL.

      A-2. ACDO/MLV PERFORATED WITHOUT LVF OR LVM INDICATES A TROUBLE RECORD FROM THE CO-LOCATED ACD OFFICE.

3. THE DESIGNATION LVM STANDS FOR LINE VERIFICATION MATCH IF THE MLV DESIGNATION IS PUNCHED INDICATING A LINE VERIFICATION TEST CALL. HOWEVER, LVM WITHOUT MLV IS USED TO INDICATE A CALLING LINE IDENTIFICATION CARD.

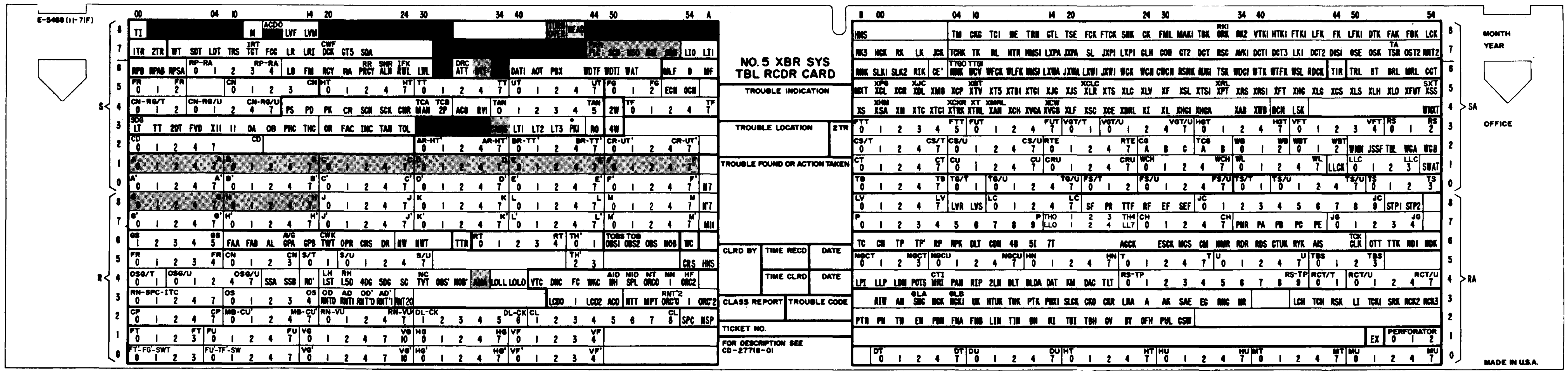
ISSUE	DWG SIZE	DOUBLE SIDED 2/X TROUBLE CARD (E5488) FLOW CHART INDEX FOR ANALYSIS
5	6S	

SFD-10-01- A202 BELL LABORATORIES

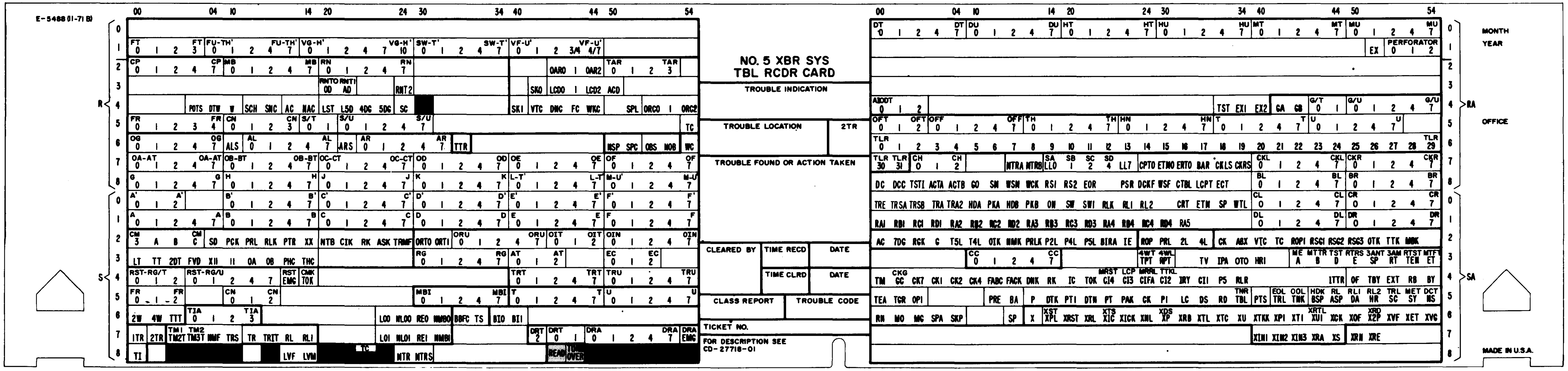
SFD-10-01-A202
7 SHEETS, SHEET 1

DOUBLE SIDED 2/X

FRONT



BACK



▨	READ / TURN OVER
■	TYPE OF CALL
▨	SUB TYPE OF CALL
■	TYPE OF EQUIPMENT REQUESTING TROUBLE RECORD
☐	CALLING LINE IDENTIFICATION
■	TEST CALLS

DOUBLE SIDED 2/X
TROUBLE CARD

SFD-10-01-A203

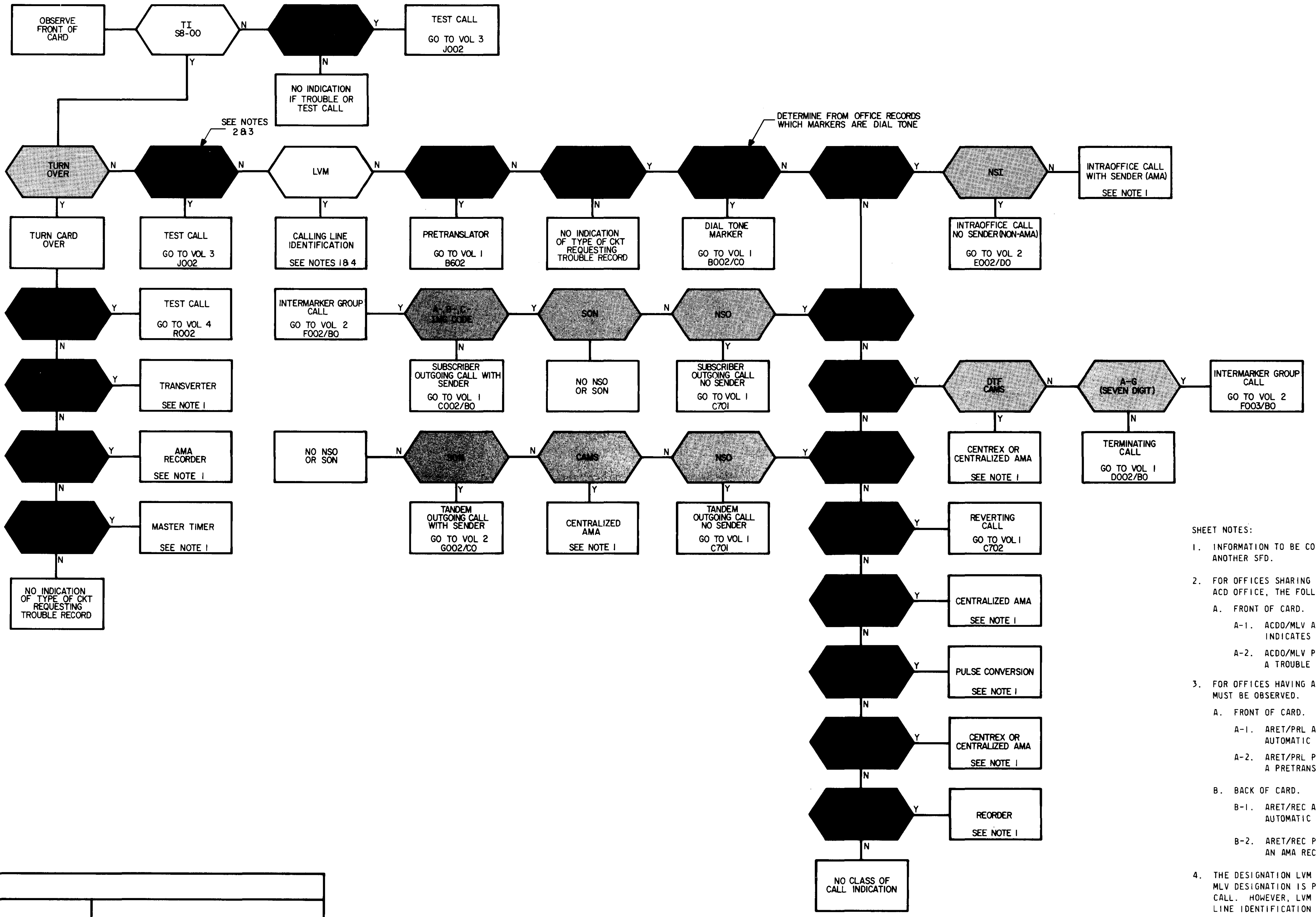
ISSUE 5

BELL TELEPHONE LABORATORIES
INCORPORATED

SIZE 6S

SFD-10-01-A203
7 SHEETS, SHEET 1

FLOW CHART
DOUBLE SIDED I/X TROUBLE CARD


OBSERVE FRONT OF CARD
TI S8-00
N
Y
TEST CALL GO TO VOL 3 J002
NO INDICATION IF TROUBLE OR TEST CALL
SEE NOTES 2&3
DETERMINE FROM OFFICE RECORDS WHICH MARKERS ARE DIAL TONE
TURN OVER
LVM
NSI
INTRAOFFICE CALL WITH SENDER (AMA) SEE NOTE 1
TURN CARD OVER
TEST CALL GO TO VOL 3 J002
CALLING LINE IDENTIFICATION SEE NOTES 1&4
PRETRANSLATOR GO TO VOL 1 B602
NO INDICATION OF TYPE OF CKT REQUESTING TROUBLE RECORD
DIAL TONE MARKER GO TO VOL 1 B002/C0
INTRAOFFICE CALL NO SENDER (NON-AMA) GO TO VOL 2 E002/D0
TEST CALL GO TO VOL 4 R002
INTERMARKER GROUP CALL GO TO VOL 2 F002/B0
A, B, C, IMS CODE
SON
NSO
TRANSVERTER SEE NOTE 1
SUBSCRIBER OUTGOING CALL WITH SENDER GO TO VOL 1 C002/B0
NO NSO OR SON
SUBSCRIBER OUTGOING CALL NO SENDER GO TO VOL 1 C701
DTF CAMS
A-G (SEVEN DIGIT)
INTERMARKER GROUP CALL GO TO VOL 2 F003/B0
AMA RECORDER SEE NOTE 1
NO NSO OR SON
SON
CAMS
NSO
CENTREX OR CENTRALIZED AMA SEE NOTE 1
TERMINATING CALL GO TO VOL 1 D002/B0
MASTER TIMER SEE NOTE 1
TANDEM OUTGOING CALL WITH SENDER GO TO VOL 2 G002/C0
CENTRALIZED AMA SEE NOTE 1
TANDEM OUTGOING CALL NO SENDER GO TO VOL 1 C701
REVERTING CALL GO TO VOL 1 C702
NO INDICATION OF TYPE OF CKT REQUESTING TROUBLE RECORD
CENTRALIZED AMA SEE NOTE 1
PULSE CONVERSION SEE NOTE 1
CENTREX OR CENTRALIZED AMA SEE NOTE 1
REORDER SEE NOTE 1
NO CLASS OF CALL INDICATION

SHEET NOTES:

1. INFORMATION TO BE COVERED IN A LATER ISSUE OF THIS SFD, OR IN ANOTHER SFD.
2. FOR OFFICES SHARING THE TROUBLE RECORDER WITH A CO-LOCATED ACD OFFICE, THE FOLLOWING MUST BE OBSERVED.
   - A. FRONT OF CARD.
     - A-1. ACDO/MLV AND EITHER LVF OR LVM PERFORATED INDICATES A MARKER LINE VERIFICATION TEST CALL.
     - A-2. ACDO/MLV PERFORATED WITHOUT LVF OR LVM INDICATES A TROUBLE RECORD FROM THE CO-LOCATED ACD OFFICE.
3. FOR OFFICES HAVING AUTOMATIC RANGE EXTENSION, THE FOLLOWING MUST BE OBSERVED.
   - A. FRONT OF CARD.
     - A-1. ARET/PRL AND MKR BOTH PERFORATED INDICATES AN AUTOMATIC RANGE EXTENSION TEST CALL.
     - A-2. ARET/PRL PERFORATED WITHOUT A MKR PUNCH INDICATES A PRETRANSLATOR REQUESTED THE RECORD.
   - B. BACK OF CARD.
     - B-1. ARET/REC AND ARET BOTH PERFORATED INDICATES AN AUTOMATIC RANGE EXTENSION TEST CALL.
     - B-2. ARET/REC PERFORATED WITHOUT A REC PUNCH INDICATES AN AMA RECORDER REQUESTED THE RECORD.
4. THE DESIGNATION LVM STANDS FOR LINE VERIFICATION MATCH IF THE MLV DESIGNATION IS PUNCHED INDICATING A LINE VERIFICATION TEST CALL. HOWEVER, LVM WITHOUT MLV IS USED TO INDICATE A CALLING LINE IDENTIFICATION CARD.

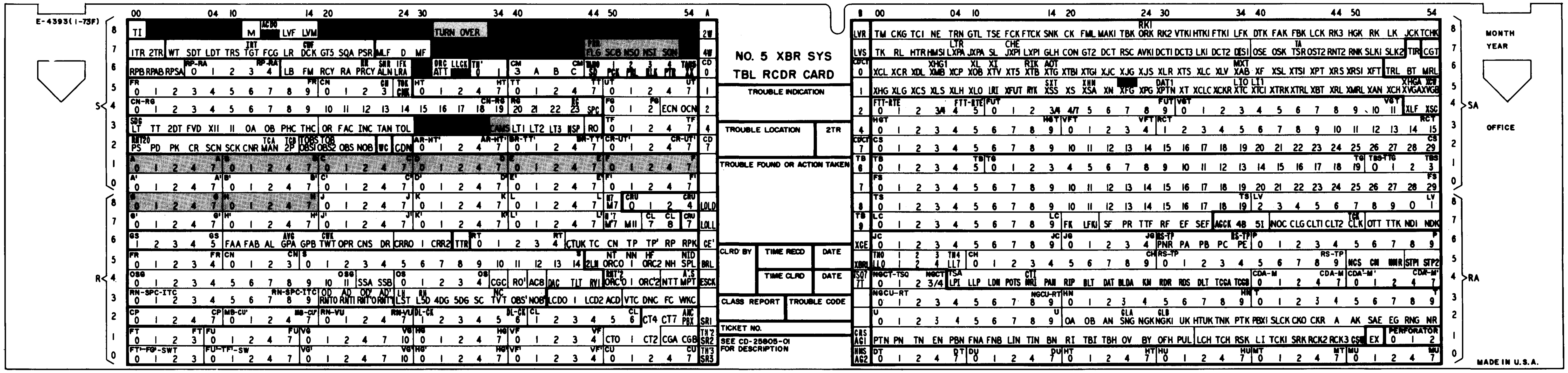
ISSUE	DWG SIZE	DOUBLE SIDED I/X TROUBLE CARD (E4393) FLOW CHART INDEX FOR ANALYSIS
5	6S	

SFD-10-01- A204 BELL LABORATORIES

SFD-10-01-A204
7 SHEETS, SHEET 1

DOUBLE SIDED I/X

FRONT



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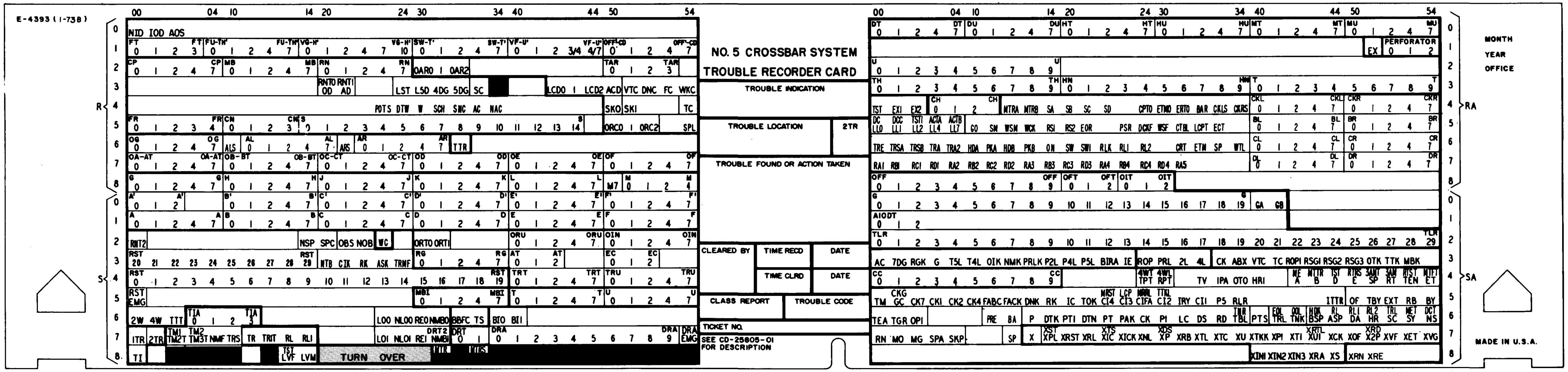


▨	READ/TURN OVER	■	TYPE OF EQUIPMENT REQUESTING TROUBLE RECORD
■	TYPE OF CALL	□	CALLING LINE IDENTIFICATION
▨	SUB TYPE OF CALL	■	TEST CALLS

ISSUE
5

DOUBLE SIDED I/X
TROUBLE CARD

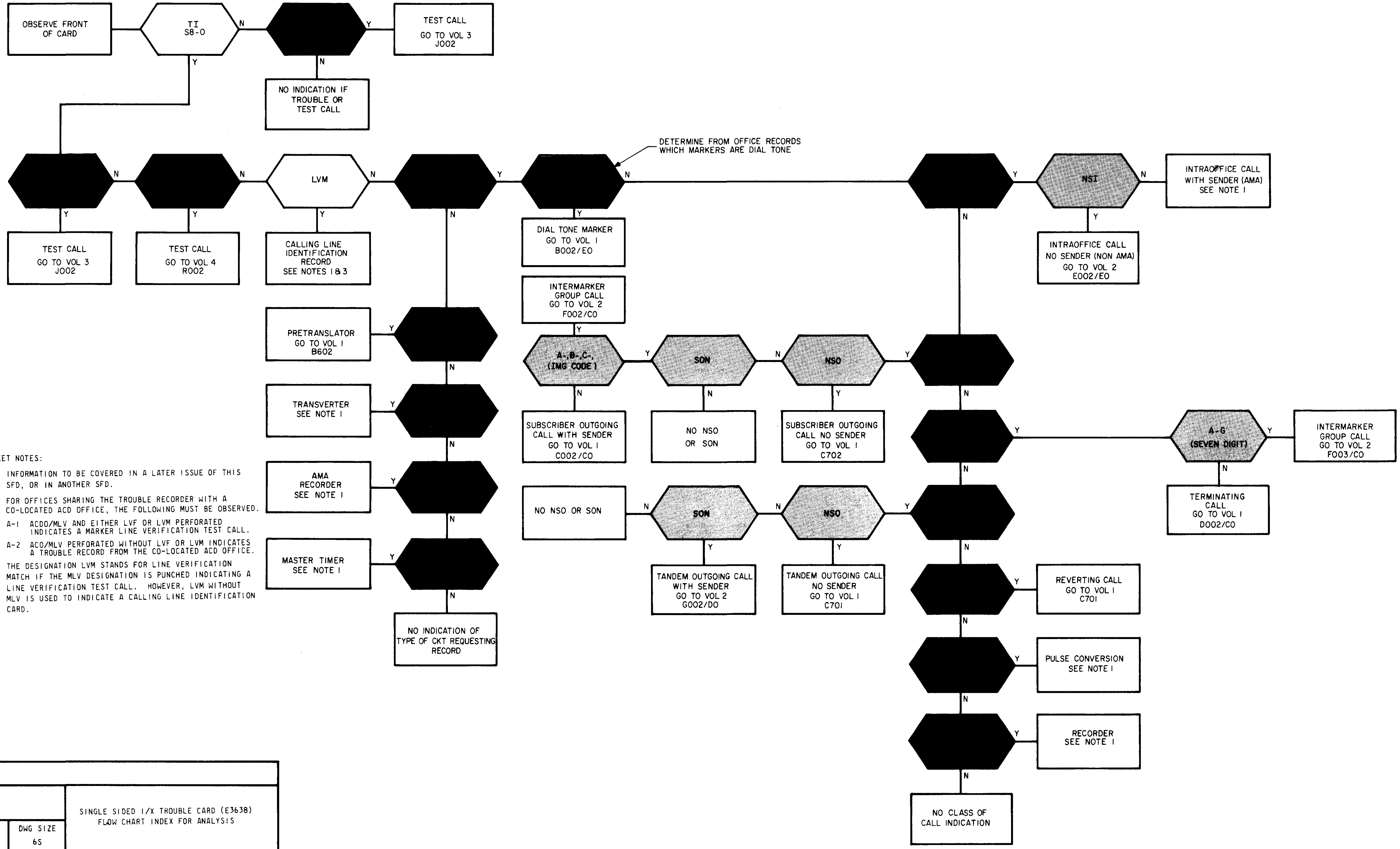
BELL TELEPHONE LABORATORIES
INCORPORATED

6S

SFD-10-01-A205

SFD-10-01-A205
7 SHEETS, SHEET 1

FLOW CHART
SINGLE SIDED I/X TROUBLE CARD


OBSERVE FRONT OF CARD
TI S8-0
N
Y
TEST CALL GO TO VOL 3 J002
N
NO INDICATION IF TROUBLE OR TEST CALL
DETERMINE FROM OFFICE RECORDS WHICH MARKERS ARE DIAL TONE
N
Y
TEST CALL GO TO VOL 3 J002
N
Y
TEST CALL GO TO VOL 4 R002
LVM
N
Y
CALLING LINE IDENTIFICATION RECORD SEE NOTES 1 & 3
Y
N
DIAL TONE MARKER GO TO VOL 1 B002/E0
INTERMARKER GROUP CALL GO TO VOL 2 F002/C0
Y
N
NSI
N
INTRAOFFICE CALL WITH SENDER (AMA) SEE NOTE 1
Y
INTRAOFFICE CALL NO SENDER (NON AMA) GO TO VOL 2 E002/E0
PRETRANSLATOR GO TO VOL 1 B602
Y
N
TRANSVERTER SEE NOTE 1
Y
N
AMA RECORDER SEE NOTE 1
Y
N
MASTER TIMER SEE NOTE 1
Y
N
NO INDICATION OF TYPE OF CKT REQUESTING RECORD
A-,B-,C-, (IMG CODE)
Y
SON
N
NSO
Y
N
SUBSCRIBER OUTGOING CALL WITH SENDER GO TO VOL 1 C002/C0
N
NO NSO OR SON
Y
SUBSCRIBER OUTGOING CALL NO SENDER GO TO VOL 1 C702
N
Y
A-G (SEVEN DIGIT)
Y
INTERMARKER GROUP CALL GO TO VOL 2 F003/C0
N
TERMINATING CALL GO TO VOL 1 D002/C0
NO NSO OR SON
N
SON
N
NSO
Y
Y
Y
TANDEM OUTGOING CALL WITH SENDER GO TO VOL 2 G002/D0
TANDEM OUTGOING CALL NO SENDER GO TO VOL 1 C701
N
Y
REVERTING CALL GO TO VOL 1 C701
N
Y
PULSE CONVERSION SEE NOTE 1
N
Y
RECORDER SEE NOTE 1
N
NO CLASS OF CALL INDICATION

SHEET NOTES:

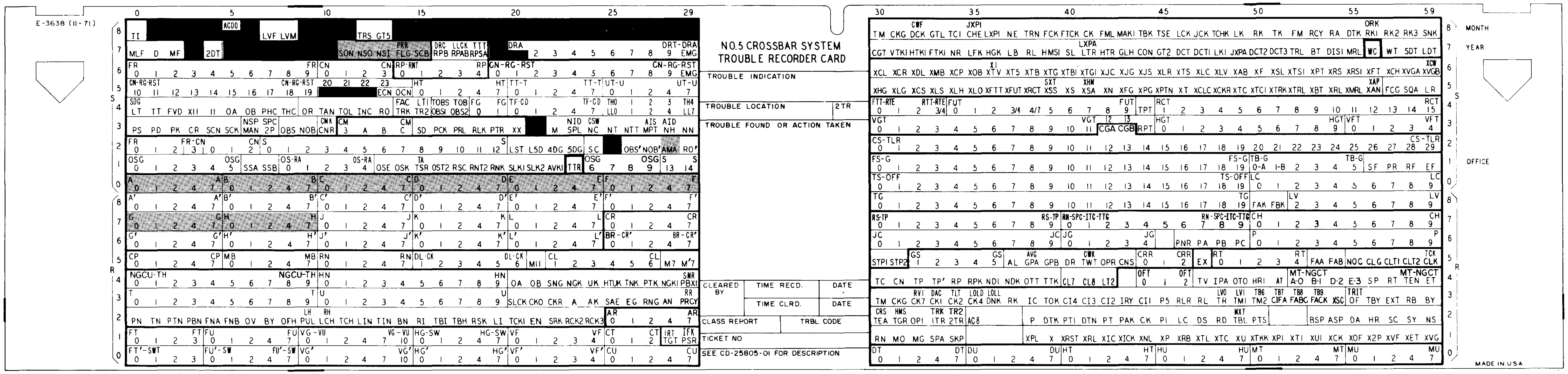
1. INFORMATION TO BE COVERED IN A LATER ISSUE OF THIS SFD, OR IN ANOTHER SFD.
2. FOR OFFICES SHARING THE TROUBLE RECORDER WITH A CO-LOCATED ACD OFFICE, THE FOLLOWING MUST BE OBSERVED.
   - A-1 ACDO/MLV AND EITHER LVF OR LVM PERFORATED INDICATES A MARKER LINE VERIFICATION TEST CALL.
   - A-2 ACO/MLV PERFORATED WITHOUT LVF OR LVM INDICATES A TROUBLE RECORD FROM THE CO-LOCATED ACD OFFICE.
3. THE DESIGNATION LVM STANDS FOR LINE VERIFICATION MATCH IF THE MLV DESIGNATION IS PUNCHED INDICATING A LINE VERIFICATION TEST CALL. HOWEVER, LVM WITHOUT MLV IS USED TO INDICATE A CALLING LINE IDENTIFICATION CARD.

SINGLE SIDED I/X TROUBLE CARD (E3638)
FLOW CHART INDEX FOR ANALYSIS

ISSUE	DWG SIZE
5	6S

SFD-10-01- A206 BELL LABORATORIES

SINGLE SIDED 1/X



■ TYPE OF CALL

▨ SUB TYPE OF CALL

■ TYPE OF EQUIPMENT REQUESTING TROUBLE RECORD

☐ CALLING LINE IDENTIFICATION

■ TEST CALLS

SINGLE SIDED 1/X
TROUBLE CARD

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

ISSUE 5

SFD-10-01-A207

SFD-10-01-A207
6 SHEETS, SHEET 1

RELAYS

DESIG	CKT	LOC	EQPT LOC •
(LLT)	CM	K619/G2	C29R
(TBT-)	MG	K414/D4,D6,D8	
(VER2)	MTC	K105/E0	R9
(XTA)	CM	K116/E8	C9L
A	IR	L114/A8	
A	IR	L228/C0	
A	TT	M009/B4	
A	OT&P	M209/C8	
A	IT	M211/B3,F3	
A	IT	M309/B3	
A	IT	M408/B4	
A	TT	M609/B4	
A	ITT	M708/B3	
A	TT	M709/B4	
A	IR MF	P208/A5	
AAB	AMRST	P207/H7	Y-26
AB	IR	L113/D1	
AB0-8	MTFC	J121/F3	
AB0-8	MTFC	K707/F6	
AC	AMRST	L108/F6	Y-27
AC	AMRST	L230/G5	
AC	AMRST	P206/B8	Y-27
ACV	JLK	K621/F9	
ACV1	JLK	K621/G9	
AC0	AMRST	L319/E2	WR19
AC0	AMRST	P114/E6	WR19
AC0	AMRST	P318/F1	WR19
AC0	AMRST	P318/F2	WR19
AC0,1,2,4,7	CM	K120/A7	T26R
AC0,1,2,4,7	PRT	K804/A8	
AC0,1,2,4,7	CM	L122/A4	T26R
AC0,1,2,4,7	CM	L316/A4	T26R
AC0,1,2,4,7	CM	L317/A4	T26R
AC0,1,2,4,7	CM	P312/B2	T26R
AD	AMRST	L212/E7	WL41
AD	AMRST	L213/E7	WL41
AD	AMRST	L214/E5	WL41
AD1	AMRST	L212/E8	WL41
AD1	AMRST	L213/E8	WL41
AD1	AMRST	L214/E6	WL41
AD3	AMRST	L214/E6	WR24
AD4	AMRST	L214/E7	WR24
ALS0-5	CM	K405/B9-F9	P28
AMA	OSC	K206/B2	
AMB	CM	J117/B1	C20R
AMB	DTM	J117/E1	15
AMB	CM	K115/E7	C20R
ANS	TT	M009/D4	
ANS	TT	M109/E3	
ANS	TT	M4C9/D1	
ANS	TT	M509/G4	
ANS	TT	M609/D1	
ANS	TT	M709/F0	
AOA	CM	K518/F5	C27R
AOA	CM	K519/F5	C27R
AOA	CM	M111/F5	C27R
AOA	CM	M112/F5	C27R
AOC	CM	K518/E4	C25R
AOC	CM	M111/E4	C25R
AON	AMRST	L211/A4	Y-31
AON	AMRST	P108/B6	Y-31
APA-K	AMRST	P109/A0-G0	Y-18
AS	TT	K614/A0	
AS	AMRST	L235/D1	Y-41
AS	TT	M008/C2	
AS	TT	M108/C2	
AS	TT	M208/C2	
AS	TT	M210/C2	
AS	TT	M308/C2	
AS	TT	M508/C2	
AS	TT	M608/C1	
AS-LS	AMRST	P211/D1-D7	Y-41
ASA	AMRST	L235/D1	Y-41
ASA-LSA	AMRST	P211/D1-D7	Y-41
ASB	MTC	J123/D4	R12
ASB	MTC	K206/E0	R12
ASB	CM	K206/E4	C18L
AST	CM	K406/C9	T38R
AV	ST	J103/C5	
AV	OS	K205/G9	
AVK	CM	K205/G4	C21L
AVK1	CM	K206/E7	C22L
A0-11	MTFC	J120/B1-B3	
A0,1,2,4,7	CM	K207/A4	T28R
A0,1,2,4,7	OS	K207/A7	
A0,1,2,4,7	AMRST	L116/A2-C2	Y-41
A0,1,2,4,7	OS	L122/A8	
A0,1,2,4,7	CM	L122/B5	T28R
A0,1,2,4,7	AMRST	L236/F5,F6	Y-41
A0,1,2,4,7	AMRST	P216/D3,D5	Y-41
A0,1,2,4,7	OS	P313/A7	
A0,1,2,4,7	CM	P313/B4	T28R
A12-17	MTFC	J121/B2,B3	
A6-8	MTFC	J121/A1	
B	OT&P	M209/C8	
BAT	JLK	K115/E9	
BA0-9	PRT	K806/A1-C1	
BB	MTC	K119/E2	R8
BC0,1,2,4,7	CM	K120/F7	T27R
BC0,1,2,4,7	PRT	K804/E8	
BC0,1,2,4,7	CM	L122/B4	T27R
BC0,1,2,4,7	CM	L316/B4	T27R
BC0,1,2,4,7	CM	L317/B4	T27R
BC0,1,2,4,7	CM	P312/B2	T27R
BC0,10,20	DTM	K106/A5,A7,B5	47,50,S-3
BC0,10,20	CM	K117/H5	C47R,F3
BD	AMRST	L218/G4	WL20
BD1	AMRST	L219/C1	WL23
BD2	AMRST	L218/H5	WL24
BFR1-5	AMRST	P318/A1-E1	Y-20
BG	CM	K117/G5	C21L
BL	AMRST	L108/C6	WR26
BL	IR	P110/G7	
BLT1	AMRST	L208/B6	WR26
BL1	AMRST	L108/D6	WR26
BN	MTC	K413/F3	R33
BN	CM	K413/F6	C31L
BP	AMRST	L212/E6	WL41
BP	AMRST	L213/E6	WL41
BP	AMRST	L214/E4	WL41
BS	PRT	K807/E0	
BS	AMRST	L235/D2	Y-42
BSA	AMRST	L235/D2	Y-42
BT	MTC	K107/B3	R4
BT	MTC	K712/B3	R4
BT	MTC	K713/B1	R4
BT	AMRST	L319/C3	WR14
BT1	AMRST	L208/E3	WR23
BT2	AMRST	L109/C5	WR23
BY	OGIT	M208/D8	
B0-9	MTFC	J120/E1-E3	
B0-9	PRT	K806/A1-C1	
B0,1,2,4,7	CM	K207/C4	T28R
B0,1,2,4,7	OS	K207/C7	
B0,1,2,4,7	AMRST	L116/C2	Y-48
B0,1,2,4,7	CM	L122/C5	T28R
B0,1,2,4,7	OS	L122/C7	
B0,1,2,4,7	AMRST	L217/C1	Y-48
B0,1,2,4,7	AMRST	L236/F7	Y-48
B0,1,2,4,7	AMRST	P216/D7	Y-48
B0,1,2,4,7	CM	P313/C4	T28R
B10-12	MTFC	J121/D2,C3	
B4	MTFC	J121/C2	
B6	MTFC	J121/C0	
C	AMRST	L113/C6	WR27
C	OT&P	M209/B8	
CAU0-9	CM	K519/B5	C52R
CAU0-9	CM	M112/B5	C52R
CCK	AMRST	L315/F1	WR30
CCM	PRT	K807/G1	
CCT	JLK	K612/D2	
CCT	JLK	K620/G6	
CCT	JLK	K621/F8	
CC0,1,2,4,7	CM	K121/A7	T27R
CC0,1,2,4,7	PRT	K804/E8	
CC0,1,2,4,7	CM	L122/C4	T27R
CC0,1,2,4,7	CM	L316/B4	T27R
CC0,1,2,4,7	CM	L317/B4	T27R
CC0,1,2,4,7	CM	P312/C2	T27R
CDK0,1	CM	K203/A6	C18L
CDP	AMRST	L233/C7	Y-27
CDP	AMRST	P213/C7	Y-27
CG	AMRST	P212/C1	WL36
CGA	CM	K125/B7	T49L
CGA	MTC	K516/D1	L45
CGA	DTM	K516/F6	31
CGB	CM	K125/D7	T49L
CGB	MTC	K516/F1	L45
CGB	DTM	K516/G6	31
CGC	AMRST	P212/D1	Y-38
CGT	CM	K612/D4	C27R
CGT	JLK	K612/E2	
CH	PCMB	K306/C8	
CH	PCMB	K307/C9	
CH	PCMB	K407/A3,E3	
CH	LL	K511/A3	
CH	LL	K511/E3	
CH	OGT	M008/F6	
CH	IAO	M110/E5	
CHA	DTM	K604/A0	23
CHA	CM	K605/A0	C31R
CHA1	CM	K605/A0	C28R
CHT	CM	K605/G6	C24R
CHT0	DTM	K618/G2	19
CHT0	CM	K619/G2	C24R
CHT5	DTM	K618/G6	19
CHT5	CM	K619/G6	C24R
CHT9	DTM	K618/G9	19
CHT9	CM	K619/G9	C24R
CH0-9	DTM	K604/A2-A7	17
CH0-9	CM	K605/A2-A7	C22R
CI	AMRST	J108/A1	Y-11
CI	AMRST	J112/A1	Y-11
CI	AMRST	L309/E6	Y-11
CI	AMRST	P307/A6	Y-11
CIC	MTFC	J118/A8	
CIT	MTFC	J118/A3	
CI1	AMRST	L117/A6	Y-11
CK	IR	L114/B8,F8	
CKE	AMRST	L325/E2	Y-13
CKE	AMRST	P316/C1	Y-13
CKG	MTC	K106/F1	R5
CKG1,2	DTM	K106/E4	21,23
CKG1,2	CM	K117/H3	C35R
CKG1,2	DTM	K708/A9	21,23
CKG1,2	CM	K711/B9	C35R
CKG4,5,6	CM	K117/H5	C35R
CKG4,8	CM	K309/F1	C35R
CKN	AMRST	L324/D0	Y-13
CKN	AMRST	P314/G2	Y-13
CKS	AMRST	L322/D1	Y-13
CKS	AMRST	L323/B0	Y-13
CKS	AMRST	P316/B1	Y-13
CK1	MTC	K624/B1	R43
CK2	MTC	K624/B2	R44
CK2	SR	L232/G7	
CK2	SR	P209/G7	
CK3	SR	L232/G4	
CK3	SR	P209/G4	
CL	IMGT	M510/C6	
CL1-6	OS	L119/C9	
CL1-8	AMRST	L119/A0-F0	Y-32,WR5
CL1-8	OS	L119/C9	
CL1-8	AMRST	P315/A1-E1	Y-32,WR5
CL1-8	OS	P315/C9	
CMA-C	PRT	K807/A0-C0	
CMA-C	MTC	K807/E6,F6	
CMS	AMRST	P114/B0	Y-17
CMS	AMRST	P114/B0	Y-17
CM3	PRT	K807/D0	
CM3	MTC	K807/D6	R51

• SHEET NOTES:

1. EXPLANATION OF EQPT LOC

CM SD-26002-01 COMPLETING MARKER CIRCUIT
C--L OR C--R LEFT OR RIGHT COMMON EQPT FRAME (CE)
T--L OR T--R LEFT OR RIGHT TRANSLATOR AND CODE TREATMENT FRAME (T&CT)
S-- SUPPLEMENTAL OR AUX SERV TREATMENT FRAME (SST) OR (AST)
RR-- ROUTE RELAY FRAME (RR)
F-- FC RELAY FRAME (FCR)
P-- PBX ALLOTTER FRAME (PBX ALLR)
CV-- CODE CONVERSION FRAME (CC)
REL R RELAY RACK FRAME (RR)
DTM SD-26001-01 DIAL TONE MARKER CIRCUIT
-- DIAL TONE MARKER FRAME (DTM)
S-- SUPPLEMENTARY DIAL TONE MARKER FRAME (SDTM)
MTC SD-25800-01 MASTER TEST CONTROL CIRCUIT
L-- OR R-- LEFT OR RIGHT MTF CONTROL FRAME (MTF CONT)

RELAY RACK MOUNTED EQPT
RR4 PAIRED LINE LINK CONTROL (RR)

APPARATUS INDEX		DWG SIZE C2	ISSUE 5
BELL LABORATORIES	SFD-10-01		A701

PRINTED IN U.S.A.

RELAYS

DESIG	CKT	LOC	EQPT LOC *
CN	OGT	K314/B9	
CN	CM	K518/D4	C25R
CN	CM	M111/D4	C25R
CNA	CM	K518/F5	C27R
CNA	CM	K519/F5	C27R
CNA	CM	M111/F5	C27R
CNA	CM	M112/F5	C27R
CNR	MTC	K124/E1	R43
COM	MTMG	J110/G0	
COM	MTMG	J114/G1	
CON	MTC	K612/C0	R42
CON	DTM	K620/D9	25
CON	CM	K621/D9	C26R
CONA	CM	K612/A6	C26R
CONA	DTM	K612/A6	4
CONT	TRC	K707/C2	
CON1	CM	K612/C4	C26R
CON1	DTM	K612/C4	24
CON1	DTM	K620/G8	24
CR	CM	K124/D5	T40R
CR	PRT	K806/E0	
CS	PRT	K806/E0	
CS	AMRST	L235/D2	Y-43
CS	OGT	M008/B8	
CS	IAO	M108/B8	
CS	OGT	M210/B8,F8	
CS	OGT	M308/B7	
CS	TT	M409/G1	
CS	IMGT	M508/B8	
CS	TT	M608/B3	
CS	ITT	M708/B4	
CS	TT	M709/D2	
CSA	AMRST	L235/D2	Y-43
CSD	PRT	K807/D1	
CSGK	MTC	K517/G1	L-45
CSK	MTC	K517/E1	R9
CSK	CM	K519/E3	C12L
CSK	MTC	M111/D0	R9
CSK	MTC	M112/E0	R9
CSK	CM	M112/E3	C12L
CSK1	MTC	K517/C1	L45
CSK1	MTC	M111/C0	L45
CSK1	MTC	M112/C0	L45
CSRK	MTC	K517/F1	L45
CSRK	MTC	M111/E0	L45
CSRK	MTC	M112/F0	L45
CSR0-9	DTM	K517/D6	5
CSTK1	DTM	K517/H6	31
CSTK2	DTM	K517/F6	31
CST0-9	DTM	K517/C6	30,6
CST0-9	CM	K519/C5	C12L
CST0-9	CM	M112/C5	C12L
CSU0-9	DTM	K517/D6	30
CSU0-9	CM	K519/C5	C12L
CSU0-9	CM	M112/D5	C12L
CT	PRT	K806/F0	
CT	OT&P	M209/D7	
CTA0-9	CM	K125/B8	T48L
CTB0,1,2	CM	K125/C8	T49L
CTG	AMRST	L222/A2	WL13
CTT	AMRST	L322/E1	WR23
CTT	AMRST	L323/C0	WR23
CT0-2	DTM	K516/D6,E6	30
CT0,1,2,4,7	CM	K125/A7	T48L
CT1	MTC	K614/D0	R42
CT1-4	MTC	K612/A1,B1	R42
CU	PRT	K806/D3	
CUA	PRT	K806/D3	
CUA0,1,2,4,7	CM	K125/E7	T48L
CUB0,1,2,4,7	CM	K125/E7	T49L
CV	PRT	K806/E3	
CVA	PRT	K806/E3	
CW	PRT	K806/F3	
CWA	PRT	K806/F3	
CZC	PRT	K806/F1	
CZ0-9	PRT	K806/A2-C2	
C0	IRL	L113/C4	

DESIG	CKT	LOC	EQPT LOC *
C0	IT	M209/E3	
C0	IT	M309/E2	
C0	IT	M408/D3	
C0	ITT	M708/C2	
C0-7	MTFC	J120/B5-B7	
C0,1,2,4,7	CM	K207/C4	T28R
C0,1,2,4,7	OS	K207/D7	
C0,1,2,4,7	AMRST	L116/D2	Y-43
C0,1,2,4,7	OS	L122/C7	
C0,1,2,4,7	CM	L122/D5	T28R
C0,1,2,4,7	AMRST	L217/C1	Y-43
C0,1,2,4,7	AMRST	L236/F9	Y-43
C0,1,2,4,7	AMRST	P216/D7	Y-43
C0,1,2,4,7	CM	P313/D4	T28R
C4,5	MTFC	J121/A5	
C8-11	MTFC	J121/B6,B8	
D	DTM	K106/C4	15
D	OGT	K313/C9	
D	AMRST	L308/A2	WR27
D	OGT	M008/G7	
D	OT&P	M209/B8	
D	IT	M309/F0	
D	IT	M408/D2	
D	ITT	M708/C1	
DA	AMRST	L219/E5	WL23
DA1	AMRST	L219/D5	WL23
DCI	CM	K413/C6	C33R
DCK	CM	K118/D6	C17R
DCK	IR	L113/B1	
DCK	AMRST	L313/B1	WR30
DCK	CM	L313/C4	C17R
DCT	DTM	K616/E4	25
DCT	CM	K617/D4	C29R
DCT	MTC	K708/E1	R3
DCT	CM	K710/G2	C29R
DCT1	DTM	K708/B3	24
DCT1	CM	K710/B9	C33R
DD8	AMRST	P210/E9	WL36
DD8A	AMRST	P210/E9	WL36
DD9	AMRST	P210/H9	Y-37
DD9A	AMRST	P210/E9	Y-37
DIR	AMRST	P110/B4	Y-22
DIR1	AMRST	L107/B6	WR22
DIR2	AMRST	L109/B1	WR22
DIR2	AMRST	P110/B4	WR22
DISA	CM	J117/B2	C18R
DISA	DTM	J117/E2	22
DISA	CM	K115/F5	C18R
DISC	AMRST	L240/D0	WR6
DIS1,2	DTM	K708/A6	22
DIS1,2	MTC	K708/D5	R4
DIS1,2	CM	K711/B8	C18R
DIS1,2	MTC	K711/F7	R4
DIS1,2	CM	L319/C7	C18R
DL	CM	K707/F8	C18R
DL	PRT	K808/E1	
DL	AMRST	L125/B6	Y-11
DL	AMRST	P307/D2	Y-11
DLP	AMRST	L208/B6	Y-11
DLP1	AMRST	L208/C6	WR26
DL1-3	AMRST	L119/F0-H0	Y-41
DL1-3	OS	L119/F9	
DL1-3	AMRST	P315/F1-H1	Y-41
DON	AMRST	L211/A4	Y-35
DON	AMRST	P108/A7	Y-35
DOR	AMRST	P112/E0	Y-22
DOR1	AMRST	L107/D3	WR22
DOR2	AMRST	L109/A5	WR22
DOR3	AMRST	L108/A2	WR17
DOS	AMRST	P112/C0	Y-22
DOS1	AMRST	L107/E6	WR21
DOS2	AMRST	L109/B5	WR21
DP	CM	K119/A0	T40R
DP	IR	L113/H1	
DP	AMRST	L208/F0	WL23
DP	CM	L311/F4	T40R
DPM	AMRST	P108/H6	Y-31

DESIG	CKT	LOC	EQPT LOC *
DPM1	AMRST	P108/D7	Y-26
DPS	LITC	J119/D3	
DPST	AMRST	L108/B6	WR6
DPT	AMRST	L311/E1	WL28
DP1	AMRST	L208/F0	WL23
DR	AMRST	L108/E2	WR25
DS	AMRST	L235/D3	Y-44
DSA	AMRST	L235/D3	Y-44
DSM	AMRST	L239/E5	Y-31
DSM	AMRST	P108/E6	Y-31
DSS	AMRST	L219/F5	WL23
DT	MTC	J104/B3	R2
DT	MTC	J105/B3	R2
DT	LL	K520/A5	
DTK	CM	K520/A1	C32R
DTK	DTM	K607/H2	22
DVA	DTM	K612/B9	28
DVA	CM	K612/B9	C30R
DV0	DTM	K612/A9	28
DV0	CM	K612/A9	C28R
D0,1	MTFC	J120/B7	
D0,1,2,4,7	CM	K207/D4	T28R
D0,1,2,4,7	OS	K207/D7	
D0,1,2,4,7	AMRST	L116/D2	Y-44
D0,1,2,4,7	OS	L122/D7	
D0,1,2,4,7	CM	L122/E5	T28R
D0,1,2,4,7	AMRST	L217/C2	Y-44
D0,1,2,4,7	AMRST	L237/F0	Y-44
D0,1,2,4,7	AMRST	P217/D1	Y-44
D0,1,2,4,7	CM	P313/D4	T28R
E-	PCMB	K204/C8-E9	
E-	PCMB	K306/B7-F7	
E-	PCMB	K307/A7-E7	
E-	PCMB	K407/B2-F8	
E-	LL	K511/B2	
E-	LL	K511/F2	
ECM	CM	K118/H5	T38R
EF	TL	K609/G0	
EL	TL	K609/C0	
EM	OS	L119/D9	
EM	OS	P315/D9	
EMP	AMRST	P212/F7	Y-22
EP	PC	K514/B7,E7	
EP	OS	L240/C6	
EP	OS	P212/D6	
EPR	MTC	J107/A5	L-44
ER	TL	K609/A0	
ES	AMRST	L235/D4	Y-45
ESA	AMRST	L235/D4	Y-45
ETS	DTM	K312/F3	32
ETS	CM	K313/F3	C41R
EX	CM	K128/F6	C17R
EXA	CM	K128/G5	C17R
EXB	MTFC	K128/B1	
EXG	MTFC	K128/A1	
EXR	P-REG	K128/H6	
E0	PCMB	K204/C6,E6	
E0-2	MTFC	J120/C7	
E0,1,2,4,7	CM	K207/D4	T28R
E0,1,2,4,7	OS	K207/E7	
E0,1,2,4,7	AMRST	L116/E2	Y-45
E0,1,2,4,7	CM	L122/E5	T28R
E0,1,2,4,7	OS	L122/E7	
E0,1,2,4,7	AMRST	L217/C3	Y-45
E0,1,2,4,7	AMRST	L237/F1	Y-45
E0,1,2,4,7	AMRST	P217/D1	Y-45
E0,1,2,4,7	CM	P313/E4	T28R
F	OR	K312/D9	
F	OGT	K313/D9	
F	IAO	K313/F9	
F	MTC	K316/A3	R39
FA	CM	K115/B6	C20R
FA--	TL	K317/B8,C8	
FA--	IAO	M110/D7	
FA--	TL	M510/G3	
FAC	CM	K118/B6	T51L
FAK	CM	K317/C4	C31R

DESIG	CKT	LOC	EQPT LOC *
FAK	AMRST	L118/A3	WR47
FAK	CM	L118/A6	C31R
FAK	AMRST	P309/C1	WL47
FAK	CM	P309/D4	C31R
FA1	CM	K115/C7	C20R
FB	MTC	K316/B3	R39
FB--	TL	K317/B8,C8	
FBK	CM	K317/C4	C31R
FBK	AMRST	L118/B3	WL47
FBK	CM	L118/B6	C31R
FBK	AMRST	P309/C1	WL47
FBK	CM	P309/E4	C31R
FB0-9	DTM	K304/D1-D3	47
FB0-9	CM	K305/C1-C3	C47R
FB10-19	DTM	K304/D4-D6	50
FB10-19	CM	K305/C5,C6	C50R
FB20-29	DTM	K304/D7-D9	S-3
FB20-29	CM	K305/C8,C9	F3
FC	MTC	K316/B3	R7
FCD0,10,20	DTM	K106/B5	48,S-4
FCG	DTM	K620/E7	25
FCG	CM	K621/C6	C25R
FCK	DTM	K106/G4	44
FCM0,10,20	DTM	K106/B5	47,S-3
FD	AMRST	L210/A3	WL24
FD	AMRST	L210/C3	WL24
FDA,B	AMRST	L210/A0	WL39
FD1	AMRST	L210/A3	WL24
FD2	AMRST	L219/C7	WR17
FD3	AMRST	L210/B3	WL33
FD5	AMRST	L212/C1	WL33
FD5	AMRST	L213/C1	WL33
FD5	AMRST	L214/C0	WL33
FD6	AMRST	L212/C1	WL33
FD6	AMRST	L213/C1	WL33
FD6	AMRST	L214/C0	WL33
FG0-1	CM	K127/A4,B4	C43R
FG0-2	CM	K307/F6	C43R
FG0-2	IR	L113/G1	
FG0-2	AMRST	L314/A1-C1	WL48,WL28
FG0-2	CM	L314/B4,C4	C43R
FG0-2	AMRST	P309/A1	WL48,WL28
FG0-2	CM	P309/A4,B4	C43R
FKP	AMRST	L220/F4	WL29
FL	IT	M209/D2	
FLG	CM	K117/C7	C35R
FLG1	CM	K117/D7	C35R
FM	DTM	K604/E2	21
FM	CM	K605/D2	C38R
FM	CM	K607/A6	C38R
FMF	AMRST	L223/C1	WL32
FMG	CM	K309/E0	C45R
FMG0	CM	K309/B1	C46R
FMG10	CM	K309/B4	C49R
FMG15	CM	K309/B6	C49R
FMG20	CM	K309/B8	F2
FMG25	CM	K309/B8	F2
FMG5	CM	K309/B3	46
FMK	CM	K309/G3	C45R
FML	CM	K309/E6	C45R
FMP	DTM	K604/B8	21
FMP	CM	K605/B8	C38R
FM0-4	CM	K309/B1-B6	C45R
FNK	MTC	M107/C5	R10
FPT	AMRST	L209/A5	WR15
FR	DTM	K512/A7	36
FS	AMRST	L235/D4	Y-46
FSA	CM	K118/A7	C45R
FSA	AMRST	L235/D4	Y-46
FSG1-3	AMRST	L117/D3,E3	WL47,WL28
FSG1-3	AMRST	P307/B2,C2	WL47,WL28
FS0-2	MTC	J119/F0-H0	R35
FS0-29	AMRST	L118/C2	WL28,46
FS0-29	CM	L118/C6	
FS0-29	AMRST	P309/F1-H1	WL28,46
FS0-29	CM	P309/F4	C46R,F2
FT(A,B)0-5	CM	K408/F4,G4	C11R,C40L

DESIG	CKT	LOC	EQPT LOC *
FT(A,B)0-5	CM	M110/A3,B3	C11R,C40L
FTA0-4	DTM	K504/A2-F2	S-5
FTA0-4	CM	K506/B7-D7	C11R
FTB0-3	CM	K506/B7	C40L
FTB0-5	DTM	K504/A2-G2	39,S-5
FTB4	CM	K506/C7	C11R
FTB5	CM	K506/D7	C11R
FTCK	DTM	K107/G6	44
FTCK	CM	K309/D3	C44R
FTCK1	CM	K309/F3	C44R
FTC0-9	DTM	K304/D1-D3	48
FTC0-9	CM	K305/D0-D2	C48R
FTC10-19	DTM	K304/D5,D6	51
FTC10-19	CM	K305/D3-D5	C51R
FTC20-29	DTM	K304/D8,D9	S-4
FTC20-29	CM	K305/D7-D9	F4
FTK	MTC	K506/B0	R9
FTK	MTC	M109/A3	R9
FTK1	CM	K505/H6	C46L
FTK1	CM	K508/F6	C46L
FTK1	DTM	K512/G5	36
FTK1	CM	M110/H6	C46L
FTL	CM	K408/G5	C30L
FTL	CM	K505/B3	C30L
FTL	CM	K506/D6	C30L
FTL	CM	M110/B4	C30L
FTN0-5	CM	M108/A8	C47L
FTTB	CM	K408/A7	C40L
FTT0-5	CM	K408/F3	C41L,C12R
FTT0-5	DTM	K504/A4-G4	40,S-6
FTT0-5	CM	K505/A1	C41L,C12R
FTT0-5	CM	K506/A6-C6	C41L,C12R
FTT0-5	CM	M110/A3,B3	C41L,C12R
FT0-3	DTM	K108/A7	38
FT0-3	OS	K109/B8	
FT0-3	CM	K109/C6	C42L
FT0-3	CM	K109/C6	C42L
FT0-3	CM	L120/A5	C42L
FT0-3	OS	L120/A8	
FT0-3	AMRST	L120/E4	WL43
FT0-3	AMRST	L310/B0	WL43
FT0-3	CM	L310/B4	C42L
FT0-3	AMRST	P308/A1	WL43
FT0-3	CM	P308/B5	C42L
FUK	MTC	K506/D0	R9
FUK	MTC	M109/B3	R9
FUL	CM	K408/H5	C30L
FUL	CM	K505/C3	C30L
FUL	CM	K506/G6	C30L
FUL	CM	M110/C4	C30L
FUN0-9	CM	M108/B8	C47L
FUT0-9	CM	K506/E6,F6	C41L
FUT0-9	CM	K408/G3,H3	C41L
FUT0-9	DTM	K504/A0-G0	39
FUT0-9	CM	K505/B1,C1	C41L
FUT0-9	MTFC	M110/B1,C1	
FUT0-9	CM	M110/B3,C3	C41L
FU0,1,2,4,7	DTM	K108/E7	38
FU0,1,2,4,7	OS	K109/C8	
FU0,1,2,4,7	CM	K109/D6	C42L
FU0,1,2,4,7	CM	L120/B5	C42L
FU0,1,2,4,7	OS	L120/B8	
FU0,1,2,4,7	AMRST	L120/F4	WL43
FU0,1,2,4,7	AMRST	L310/C0	WL43
FU0,1,2,4,7	CM	L310/C4	C42L
FU0,1,2,4,7	AMRST	P308/B1	WL43
FU0,1,2,4,7	CM	P308/C5	C42L
FVD	CM	K116/D7	T26R
FVD	AMRST	L312/C2	WR31
FVD	CM	L312/C5	T26R
F0,1,2,4,7	CM	K207/E4	T28R
F0,1,2,4,7	OS	K207/E7	
F0,1,2,4,7	AMRST	L116/F2	Y-46
F0,1,2,4,7	OS	L123/A8	
F0,1,2,4,7	CM	L123/B5	T28R
F0,1,2,4,7	AMRST	L217/C3	Y-46
F0,1,2,4,7	AMRST	L237/F2	Y-46

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

ISSUE	DWG SIZE
5	C2

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BELL LABORATORIES

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RELAYS

DESIG	CKT	LOC	EQPT LOC *
F0,1,2,4,7	AMRST	P217/D3	Y-46
F0,1,2,4,7	CM	P313/E4	T28R
F1	MTC	K614/E6	R40
F2	MTC	K316/A3	R37
F7	CM	P313/E4	T32R
GA	AMRST	L220/G7	WL30
GBA	CM	K204/A3	C18L
GBB	CM	K204/H3	C18L
GC	DTM	K604/E9	42
GC	CM	K605/D9	C38L
GCA	DTM	K604/F9	S-5
GCA	CM	K605/E9	C11R
GK	DTM	K112/H6	36
GLH	CM	K612/A5	C26R
GLH	DTM	K612/A5	24
GLH	DTM	K613/G6	24
GLH1	DTM	K612/A7	24
GLH1	CM	K612/A7	C26R
GLH1	DTM	K613/H6	24
GR	MTC	K810/F2	R50
GR	AMRST	L108/C2	WL49
GS	AMRST	L235/D5	Y-47
GSA	AMRST	L235/D5	Y-47
GT	CM	K621/E4	C25R
GTA	CM	K612/F5	C26R
GTK	CM	K612/B7	C27R
GTL	CM	K118/F5	C23R
GTL1	DTM	K106/H4	38
GTL1	DTM	K611/B4	38
GTL2	DTM	K106/B7	29
GTL2	CM	K118/G5	C45L
GTL2	DTM	K611/B4	29
GTL3	DTM	K611/C4	29
GT1	CM	K613/C3	C26R
GT1	DTM	K613/G6	24
GT2	CM	K612/B3	C26R
GT3	CM	K612/G4	C26R
G0,1,2,4,7	CM	K207/F4	T28R
G0,1,2,4,7	OS	K207/F7	
G0,1,2,4,7	AMRST	L116/F2	Y-47
G0,1,2,4,7	OS	L123/B8	
G0,1,2,4,7	CM	L123/C5	T28R
G0,1,2,4,7	AMRST	L217/C4	Y-47
G0,1,2,4,7	AMRST	L237/F4	Y-47
G0,1,2,4,7	AMRST	P217/D3	Y-47
G0,1,2,4,7	CM	P313/F4	T28R
G1	MTC	K810/H2	R50
H	IR	L113/B0	
H	VM TST	N009/D4	
HD	PRT	K810/G7	
HDK	PRT	K810/B6	
HF	AMRST	L221/E4	RR2
HFA	CM	K115/A7	C20R
HF1-4	AMRST	L221/A0,B0	RR2
HGA-	LL	K513/A8	
HGA0-9	LL	K515/C3	
HGB-	LL	K513/A8	
HGB0-9	LL	K515/C3	
HGG	DTM	K112/E6	37
HGK	MTC	K513/B1	R9
HGK	DTM	K513/C6	23
HGK	CM	K515/E5	C31R
HGK	MTC	N109/E3	R9
HGL	CM	K505/E3	C30L
HGL	CM	K508/B6	C30L
HGL	CM	N110/F4	C30L
HGN0-9	CM	N108/C8	C50L
HGR	DTM	K112/E9	37
HGT0-9	DTM	K112/A8-C8	37
HGT0-9	CM	K505/D1,E1	C45L
HGT0-9	CM	K508/A6,B6	C45L
HGT0-9	MTFC	N110/E1	
HGT0-9	CM	N110/E3	C45L
HG0,1,2,4,7	CM	K113/B7	C44L
HG0,1,2,4,7	OS	K113/B9	
HG0,1,2,4,7	CM	L120/D5	C44L
HG0,1,2,4,7	OS	L120/D8	
HG0,1,2,4,7	AMRST	L120/G4	WL43
HG0,1,2,4,7	AMRST	L310/D0	WL43
HG0,1,2,4,7	CM	L310/D4	C44L
HG0,1,2,4,7	AMRST	P308/C1	WL43
HG0,1,2,4,7	CM	P308/D5	C44L
HLV	AMRST	L226/F3	RR2
HMSA	MTC	K613/A9,F9	R35
HMS1	CM	K613/A6	C30R
HMS1	MTC	K613/A9,E9	R42
HMS1	DTM	K613/F6	27
HMS1	CM	L117/F8	C30R
HMS1	MTFC	P307/G8	
HN0,1,2,4,7	CM	K403/A5	T34R
HN0,1,2,4,7	CM	P310/B4	T34R
HN0,1,2,4,7	CM	P313/G3	T34R
HS	AMRST	L235/D6	Y-48
HS	TT	M408/G3	
HS	TT	M708/G2	
HSA	AMRST	L235/D6	Y-48
HTK	DTM	K112/F6	37
HTK1	DTM	K112/E9	37
HTK1	CM	K505/G6	C45L
HTK1	CM	K508/C6	C45L
HTK1	DTM	K513/B6	37
HTK1	CM	N110/H6	C45L
HTR	CM	K129/E2	C27R
HTR	DTM	K129/G2	24
HTT	DTM	K129/F8	11
HTT	CM	K129/F8	C15R
HT0,1,2,4,7	AMRST	P310/B1	WL44
H0,1,2,4,7	OS	K207/F7	
H0,1,2,4,7	CM	K207/G4	T28R
H0,1,2,4,7	AMRST	L116/G2	Y-48
H0,1,2,4,7	OS	L123/C8	
H0,1,2,4,7	CM	L123/D5	T28R
H0,1,2,4,7	AMRST	L217/C5	Y-48
H0,1,2,4,7	AMRST	L237/F5	Y-48
H0,1,2,4,7	AMRST	P217/D5	Y-48
H0,1,2,4,7	CM	P313/G4	T28R
H1	VM TST	N009/C6	
IA0	MTC	J104/C7	R6
IA0	MTC	J105/C7	R6
IMS	MTC	J104/F3	R3
IMS	MTC	J105/E3	R3
IMS1	MTC	J104/F4	R3
IMS1	MTC	J105/F4	R3
INC	MTC	J104/C3	R2
INC	MTC	J105/C3	R2
INC	CM	K116/E8	T51L
INC	AMRST	L312/D2	WR31
INC	CM	L312/D5	T51L
INT	TRC	K707/C2	
INT	AMRST	L222/B2	WL16
INT1	AMRST	L222/E4	WL16
IR	MTC	J104/E3	R2
IR	MTC	J105/E3	R2
IR	AMRST	P109/C8	Y-17
IR	P-REG	P317/E1	
IRAB	AMRST	L208/D6	WR25
IRAB	AMRST	L219/D7	WR25
IRB	AMRST	P109/D8	Y-31
IRB0-9	AMRST	P113/D5,E5	WR40
IRB0-9	AMRST	P113/F7,G7	WR40
IRD	AMRST	L108/G2	WL25
IRF	P-REG	P317/F1	
IRN	AMRST	P108/D0	Y-21
IRPS	AMRST	L208/E6	WR25
IRP0-9	AMRST	L110/D2,E2	WR40
IRP0-9	AMRST	L110/F2	WR40
IRP0-9	AMRST	L110/G2	WR40
IRP0-9	AMRST	P113/A8-C8	WR40
IRP0-9	AMRST	P113/E8,G8	WR40
IRST	AMRST	L109/C1	WR27
IS	TT	M009/B5	
IS	TT	M609/B5	
IS	TT	M709/B5	
ITD0	MTC	J104/C7	R6
ITD0	MTC	J105/C7	R6
ITD0	TT	M308/G1	
ITNP	MTC	J104/D7	R6
ITNP	MTC	J105/D7	R6
ITNP	TT	M408/G7	
ITNP	TT	M709/F2	
ITR1,2	CM	K117/A3	C34R
ITT	MTFC	J119/D9	
JGCK	DTM	K616/D6	26
JGCK	CM	K617/D6	C29R
JHM	MTC	K617/H5	R39
JS	AMRST	L235/D6	Y-49
JSA	TL	K609/E0	
JSA	AMRST	L235/D6	Y-49
JSB	TL	K609/E0	
JSQ0-5	DTM	K104/B8,C8	34
JSQ0-5	CM	K105/B8,C8	C36L
JSX	TL	K609/E0	
JSXA	TL	K609/F0	
JXP	DTM	K616/F6	26
JXP	CM	K617/E6	C29R
JXPA	CM	K613/D3	C30R
JXP1	CM	K613/C3	C30R
J0-9	TL	M210/C5,G5	
J0,1,2,4,7	OS	K207/F7	
J0,1,2,4,7	CM	K207/G4	T28R
J0,1,2,4,7	AMRST	L116/G2	Y-49
J0,1,2,4,7	OS	L123/C8	
J0,1,2,4,7	CM	L123/D5	T28R
J0,1,2,4,7	AMRST	L217/C5	Y-49
J0,1,2,4,7	AMRST	L237/F6	Y-49
J0,1,2,4,7	AMRST	P217/D6	Y-49
J0,1,2,4,7	CM	P313/G4	T28R
K	MTC	K119/F2	T28R
KA	MTC	K119/A6	R8
KA	CM	K207/B0	T29R
KA	MTC	K804/E3	R8
KA	AMRST	L223/F1	WL29
KAA	AMRST	L226/G3	RR3
KA0,1,2,4,7	AMRST	L122/F5	Y-41
KA0,1,2,4,7	AMRST	L316/A1	Y-41
KA0,1,2,4,7	AMRST	L317/A1	Y-41
KA0,1,2,4,7	AMRST	P312/A0	Y-41
KB	MTC	K804/E3	R8
KB,C	MTC	K119/B6	R8
KBC	CM	K207/B0	T30R
KB0,1,2,4,7	AMRST	L122/F5	Y-42
KB0,1,2,4,7	AMRST	L316/A1	Y-42
KB0,1,2,4,7	AMRST	L317/A1	Y-42
KB0,1,2,4,7	AMRST	P312/B0	Y-42
KC	MTC	K804/E3	R8
KCH	MTC	J107/D0	R35
KCS0-2	MTC	K112/D2-F2	R10
KCS0-2	MTC	N107/B8-D8	R10
KCS3	MTC	J123/A4	R10
KCS3,6	MTC	K119/C2	R10,L45
KCS4	MTC	K105/F0	L45
KCS4	MTC	K112/F0	L45
KCS4	MTC	N107/B5	L45
KC0,1,2,4,7	AMRST	L122/G5	Y-43
KC0,1,2,4,7	AMRST	L316/B1	Y-43
KC0,1,2,4,7	AMRST	L317/B1	Y-43
KC0,1,2,4,7	AMRST	P312/B0	Y-43
KD	MTC	K119/C6	R8
KDE	CM	K207/C0	T29R
KD0,1,2,4,7	AMRST	L122/G5	Y-44
KD0,1,2,4,7	AMRST	L316/C1	Y-44
KD0,1,2,4,7	AMRST	L317/C1	Y-44
KD0,1,2,4,7	AMRST	P312/C0	Y-44
KE	MTC	K119/D6	R8
KE0,1,2,4,7	AMRST	L122/H5	Y-45
KEC,1,2,4,7	AMRST	L316/C1	Y-45
KE0,1,2,4,7	AMRST	L317/C1	Y-45
KE0,1,2,4,7	AMRST	P312/C0	Y-45
KF	MTC	K119/D6	R8
KFG	CM	K207/C0	T30R
KFS	MTC	J107/E0	R36
KFTU	MTC	K108/G3	R11
KFU	MTC	K107/G0	R11
KFU	MTC	N107/A1	R11
KF0,1,2,4,7	AMRST	L123/F5	R-46
KF0,1,2,4,7	AMRST	L316/D1	R-46
KF0,1,2,4,7	AMRST	L317/D1	R-46
KF0,1,2,4,7	AMRST	P312/D0	R-46
KF2	MTC	J106/F8	R37
KG	MTC	K119/E6	R8
KG	CM	K207/A0	T28R
KG0,1,2,4,7	AMRST	L123/F5	R47
KG0,1,2,4,7	AMRST	L316/D1	R47
KG0,1,2,4,7	AMRST	L317/D1	R47
KG0,1,2,4,7	AMRST	P312/E0	R47
KH	MTC	K119/E6	R8
KHGA	MTC	K107/H0	R11
KHGA	MTC	N107/C1	R11
KHGT	MTC	K110/H4	R11
KHJ	CM	K207/D0	T29R
KH0,1,2,4,7	AMRST	L123/G5	Y-48
KH0,1,2,4,7	AMRST	L316/E1	Y-48
KH0,1,2,4,7	AMRST	L317/E1	Y-48
KH0,1,2,4,7	AMRST	P312/E0	Y-48
KIC	MTC	K117/B0	R39
KIC1	MTC	K117/B0	R37
KINC	MTC	K117/A0	R39
KJ	MTC	K119/F6	R8
KJSQ	MTC	K104/F6	R35
KJSQ	MTC	K105/F6	R35
KJ0,1,2,4,7	AMRST	L123/G5	Y-49
KJ0,1,2,4,7	AMRST	L316/F1	Y-49
KJ0,1,2,4,7	AMRST	L317/F1	Y-49
KJ0,1,2,4,7	AMRST	P312/F0	Y-49
KK	MTC	K119/G6	R8
KK	CM	K207/D0	T28R
KKL	CM	K207/D0	T30R
KK0,1,2,4,7	AMRST	L123/G5	Y-50
KK0,1,2,4,7	AMRST	L316/F1	Y-50
KK0,1,2,4,7	AMRST	L317/F1	Y-50
KK0,1,2,4,7	AMRST	P312/F0	Y-50
KL	MTC	K119/G6	R8
KLT	MTC	K118/F2	R39
KLT1	MTC	K118/G2	R39
KL0,1,2,4,7	AMRST	L123/G5	Y-51
KL0,1,2,4,7	AMRST	L316/G1	Y-51
KL0,1,2,4,7	AMRST	L317/G1	Y-51
KL0,1,2,4,7	AMRST	P312/G0	Y-51
KMT9	MTC	J107/G0	R36
KNT	MTC	K412/E5	R44
KOR	MTC	K118/D0	R43
KOS	MTC	J123/B4	R12
KOSA	MTC	J123/E4	R12
KOSA	MTC	K117/B0	R12
KP	AMRST	L212/E5	WL41
KP	AMRST	L213/E4	WL41
KP	AMRST	L214/E3	WL41
KP	SR	L232/G6	
KP	SR	P209/G5	
KPBX	MTC	K411/F6	R44
KPF	AMRST	L220/B7	WL28
KPS	AMRST	L220/C7	WL32
KPS1	AMRST	L220/D4	WL32
KP1	AMRST	L212/E5	WL41
KP1	AMRST	L213/E5	WL41
KP1	AMRST	L214/E3	WL41
KP1	MFSR	P210/D0	
KP1,2	SR	L232/H8	
KP1,2	SR	P209/G8	
KR	MTC	J103/E5	R4
KR	MTC	J109/G4	R4
KR	MTC	J113/H4	R4
KRA	MTC	K107/E0	R36
KRC1,2	MTC	K118/F0	R10
KRC1,2	MTC	N113/E1	R10
KRS	MTC	K622/H3	R39
KR1	MTC	J103/E5	R4
KR1	MTC	J109/G5	R4
KR1	MTC	J113/H5	R4
KS	AMRST	L235/D7	Y-50
KSA	AMRST	L235/D7	Y-50
KST7	AMRST	L123/H5	Y-38
KST7	AMRST	L316/G1	Y-38
KST7	AMRST	L317/G1	Y-38
KST7	AMRST	P312/G0	Y-38
KTF	MTC	K127/G1	R36
KTN	MTC	K117/C0	R38
KTN1,2	MTC	K117/C0,D0	R38
KTR	PRT	K807/E1	
KTS	MTC	J107/E0	R36
KV	MTC	K513/C1	R11
KVF1	MTC	K106/G0	R11
KVF1	MTC	K117/B0	R11
KVG1,2	MTC	K108/H3	R11
KVG3	MTC	K107/G0	R11
KVG3	MTC	N107/B1	R11
KVG4	MTC	N107/B1	R11
KVHG	MTC	K107/H0	R11
KV1	MTC	K107/G0	R9
KV1	MTC	N107/D1	R9
K0,1,2,4,7	CM	K207/G4	T28R
K0,1,2,4,7	OS	K207/G7	
K0,1,2,4,7	AMRST	L116/G2	Y-50
K0,1,2,4,7	CM	L123/D5	T28R
K0,1,2,4,7	OS	L123/D8	
K0,1,2,4,7	AMRST	L217/C6	Y-50
K0,1,2,4,7	AMRST	L237/F7	Y-50
K0,1,2,4,7	AMRST	P217/D7	Y-50
K0,1,2,4,7	CM	P313/G4	T28R
K1	MTC	K119/F2	R7
K2	MTC	K119/H2	R7
L	TL	K609/C0	
L	IR	L114/E8	
L	OR	L224/B0	
L	IR	L224/G2	
L	AMRST	L233/E8	Y-33
L	IT	M209/B3	
L	VM TST	N009/A1,A5	
L	IR	P207/E2	
L	OR	P207/G3	
L-	CM	K207/G4	T28R-T32R
L-	LL	M708/C4	
L-	CM	P313/G4	T28R-T32R
LA	LITC	J109/C8	
LA	LITC	J112/E3	
LA	TL	K609/B0	
LA	AMRST	L233/D7	Y-34
LA	TTL	M211/G9	
LA	CM	N110/B8	C30L
LA	AMRST	P213/D7	Y-34
LA1	AMRST	L233/G0	Y-33
LA1	AMRST	P213/E0	Y-33
LB	TL	K609/B0	
LB	CM	K613/D7	C32L
LBT	CM	K617/E0	C29R
LBTA	CM	K613/C7	C31R
LC	MTC	K317/A1	R39
LC	AMRST	L233/A9	Y-34
LCG	AMRST	L117/D3	WL47
LCG	AMRST	P307/B2	WL47
LCH	CM	K316/F6	C32L
LCH	TRC	K707/D3	
LCK	CM	K317/B4	C31R
LCM	PRT	K807/F1	
LC0-9	TL	K317/A8	
LC0-9	AMRST	L117/B6	WL48
LC0-9	AMRST	P307/B6	WL48
LD	AMRST	L233/A9	Y-34
LDT	CM	K128/G9	C16R
LDT	DTM	K128/G9	12
LE	AMRST	L233/A8	Y-34
LEA	CM	K127/C5	T38R
LEB	CM	K127/E5	T39R
LF	MTC	K412/C0	R44
LF	AMRST	L221/E4	RR2

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

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DESIG	CKT	LOC	EQPT LOC *
LFK	DTM	K513/E4	22
LFK	CM	K514/C2	C32R
LFK	CM	K514/E2	C32R
LFK	CM	K515/A7	C32R
LFKA	CM	K514/B2	C7L
LFKA	CM	K514/D2	C7L
LFT0-5	MTC	K514/G9	RR4
LF0	AMRST	L221/D0	RR2
LF0-9	CM	K412/B8-F8	REL R
LF1	MTC	K412/B1	R44
LF3	AMRST	L221/E0	RR2
LF6	AMRST	L221/E0	RR2
LF9	AMRST	L221/F0	RR2
LG-	LL	K513/D8	
LGCK	DTM	K616/E1	26
LG00	LL	K515/A2	
LHC	MTC	J123/A1	R4
LHM	MTC	K614/C1	R40
LHMA	MTC	K614/G3	R40
LHMT	MTC	K614/D6	L45
LHT	CM	K613/B7	C46L
LI	MTC	K411/E1	R10
LI	CM	K613/C7	C32L
LIN	CM	K316/A6	C26L
LIT	MTFC	J109/C7	
LIT	MTFC	J112/C4	
LIT	CM	K617/F0	C26R
LK	CM	K609/D3	C29R
LK	DTM	K609/D3	C23
LK	AMRST	L112/D5	C31R
LK	MFSR	L234/B0	
LK	TT	M009/B6	
LK	TT	M109/B6	
LK	TT	M409/B6	
LK	TT	M509/B8	
LK	TT	M609/B6	
LK	TT	M709/B6	
LK	SR	P209/A9	
LK	MFSR	P210/B0	
LKT	AMRST	L208/E6	WR26
LK1	CM	K710/C5	C33R
LK1	CM	K710/F5	C33R
LK2	MTC	K708/D4	R3
LK2	MTC	K711/F1	R3
LL	AMRST	L220/E4	WL34
LLC1-3	CM	K117/A7	C30R,C28L
LLC1,2	DTM	K106/E7	21
LLI	CM	K406/E4	C30L
LLJ	MTC	K616/G2	L45
LLJ	MTC	K617/F4	L45
LLT	DTM	K616/C3	26
LLT	DTM	K618/G2	26
LLTA	DTM	K616/D3	27
LLTA	DTM	K618/H2	27
LLTA	CM	K619/G2	C30R
LLV	AMRST	L226/G3	RR2
LOT	CM	K520/D1	C32R
LOT1	CM	K520/B1	C32R
LP	MTC	J124/A3	R41
LP	CM	J124/B2-G3	C18R
LPA	CM	K127/A5	T38R
LPB	CM	K127/C5	T39R
LR	CM	K118/D6	C17R
LR	AMRST	L313/C1	WR30
LR	CM	L313/C4	C17R
LS	AMRST	L235/D8	Y-51
LS	TT	M408/F3	
LS	MTC	M608/E4	R9
LS	TT	M708/F2	
LSA	AMRST	L235/D8	Y-51
LSD	PRT	K807/D1	
LST	MTC	K411/E0	R9
LT	MTC	J104/F7	R6
LT	MTC	J105/E7	R6
LT	CM	K116/E7	T26R
LT	CM	K118/C6	T26R
LT	PRT	K804/C8	
LT	CM	L121/C5	T26R
LT	AMRST	L121/F5	WR31
LT	AMRST	L311/H1	WR31
LT	CM	L311/H4	T26R
LTA	CM	K127/B5	T38R
LTB	CM	K127/D5	T39R
LTP	MTFC	J111/B3	
LTP	MTFC	J115/C4	
LTP1	MTFC	J111/B4	
LTP1	MTFC	J115/B5	
LTR	CM	K613/B3	C27R
LTR	DTM	K613/F6	
LT1	MTC	J104/F9	R6
LT1	MTC	J105/E8	R6
LV	MTC	J104/E7	R6
LV	MTC	J105/E7	R6
LVG	AMRST	L117/D3	WL47
LVG	AMRST	P307/A2	WL47
LVP	MTFC	J108/C3	
LVP	MTFC	J112/C3	
LVP1	MTFC	J108/A3	
LVP1	MTFC	J112/A3	
LV0-9	TI	K317/E8	
LV0-9	AMRST	L117/C6-E6	WL42,WL47
LV0-9	TL	L117/D8	
LV0-9	AMRST	P307/C6-E6	WL42,WL47
LV0-9	AMRST	P307/C8	WL42,WL47
LV1	MTC	J104/E9	R6
LV1	MTC	J105/E8	R6
LV2-9	TL	K317/E8	
LV2-9	TL	L117/D8	
LV2-9	AMRST	P307/C8	WL42,WL47
LX	TL	K609/C0	
LXP	CM	K411/C0	C29R
LXP	DTM	K616/F2	26
LXP	CM	K617/F1	C29R
LXPA	CM	K613/B7	C30R
LXP1	CM	K613/A7	C30R
L0	LL	K520/C5	
L0(0-14)	AMRST	L112/B7	RR4
L0-4	LL	M008/D4	
L0-4	LL	M108/D4	
L0-4	LL	M109/D2	
L0-4	LL	M208/D4	
L0-4	LL	M210/D4,H4	
L0-4	LL	M211/D7,H7	
L0-4	LL	M308/D4	
L0-4	LL	M408/C8	
L0-4	LL	M508/D5	
L0-4	LL	M509/D3	
L0-4	LL	M608/E5	
L0-4	LL	N008/D1	
L0-9	LL	M309/D7	
L0,1,2,4,7	OS	K207/G7	
L0,1,2,4,7	AMRST	L116/G2	Y-51
L0,1,2,4,7	CM	L123/D5	T28R-T32R
L0,1,2,4,7	OS	L123/D8	
L0,1,2,4,7	AMRST	L217/C7	Y-51
L0,1,2,4,7	AMRST	L237/F8	Y-51
L0,1,2,4,7	AMRST	P217/D8	Y-51
L1	IT	M209/D2	
L1	VM TST	N009/C4	
M	TLC	K306/B3	
M	MTC	K412/A0	R44
M	IR	L111/A6,C6,D6	
M	OR	L111/F5	
M	OS	L117/A2	
M	IR	P110/A8,C8,D8	
M	OS	P114/C2	
M	OR	P114/D4	
M-	TLC	K307/A3	
MAC1	AMRST	P108/C2	Y-21
MAC2	AMRST	P108/A4	Y-20
MAK1	DTM	K304/D0	22
MAK1	DTM	K306/C0	22
MAK1	CM	K307/B0	C44R
MAN	AMRST	P216/D6	WR17
MA1	TLC	K306/A3	
MA1	TLC	K307/A3	
MA1-	OSC	K206/B5	
MA1-	LLC	K511/C1,G1	
MA2	TLC	K306/A2	
MA2	TLC	K307/A2	
MA2-	OSC	K206/B5	
MA2-	LLC	K510/A7-G7	
MB	PRT	J117/A4	
MB	CM	J117/D1	C20R
MB	DTM	J117/G1	15
MB	CM	K115/D5	C20R
MB	OS	K206/F3	
MB	OR	K312/C9	
MB	PCMB	K406/F0	
MB	PRT	K808/G4	
MB	IR	L111/B6,C6,E6	
MB	IR	P110/B8,E8,C8	
MB	OR	P114/B9	
MB-	AMRST	P111/A3	Y-7,8,9
MBN	AMRST	P114/B7	Y-17
MBS	AMRST	P111/D3	
MB0	AMRST	P111/F3	Y-7
MB1	TLC	K307/A2	
MB1-	OSC	K206/B4	
MB1-,2-	LLC	K510/A7-G7	
MB1,2	TLC	K306/A2	
MB2	TLC	K307/A1	
MB2-	OSC	K206/B4	
MC	MTC	K104/A0	R3
MC	MTC	K105/A0	R3
MC	TRC	K707/D0	
MC	TT	M009/F5	
MC	TT	M109/F4	
MC	TT	M208/F6	
MC	TT	M308/H1	
MC	TT	M408/H7	
MC	TT	M509/E2	
MC	TT	M609/E6	
MC	TT	M709/F2	
MCA	AMRST	L309/D2	WL49
MCA-	NGC	K407/C0-G6	
MCA-	CM	K407/C0-G6	
MCA-E	AMRST	P307/A0-C0	WL49,Y52
MCB	AMRST	L309/D2	Y52
MCB-	NGC	K406/A1	
MCB0,1	CM	J117/B1,C1	C20R
MCB0,1	DTM	J117/E1,F1	15 OR S-6
MCB0,1	CM	K115/E5	C20R
MCC	AMRST	L117/C0	WL49
MCC-	NGC	K406/B1	
MCD	AMRST	L309/E2	WR16
MCD-	NGC	K406/B1	
MCE	AMRST	L309/E2	Y52
MCE-	NGC	K406/B1	
MCG	AMRST	L309/E2	WR32
MCH	AMRST	L309/F2	WR32
MCI	AMRST	L117/D0	Y-38
MCI	AMRST	P307/D0	Y-38
MCJ	AMRST	L117/E0	Y-38
MCJ	AMRST	P307/D0	Y-38
MCK	AMRST	L117/E0	Y-38
MCL	AMRST	L117/E0	Y-4
MCO	AMRST	L117/D0	WL28
MCO	AMRST	P307/D0	WL28
MCQ	AMRST	L309/F2	WR28
MCR	TRC	K707/D0	
MC1	TLC	K306/A1	
MC1	TLC	K307/A1	
MC1	TT	K710/F4	
MC1-,2-	OSC	K206/B4	
MC1-8	MTC	K104/D0-G0	R2,R36-49
MC23	MTC	K104/E0	RR25
MC23	MTC	K514/G5	RR25
MC3	MTC	K514/G5	R2
MDK	CM	K307/B0	C32R
MD1,2	TLC	K306/A0,A1	
MD1,2	TLC	K307/A0,A1	
MD7	CM	K207/G4	REL R
MD7	CM	L123/E5	REL R
MD7	CM	P313/G4	REL R
MF	DTM	K106/C4	14
MF	CM	K119/B0	T40R
MF	AMRST	L108/F2	WL39
MF	CM	L311/F4	T40R
MFC	MTC	K713/E0	R40
MFC	PRT	K808/D7	
MFC1,2	MTC	K712/C1	R4,RR21
MFC1,2	MTC	K713/D1	R4,RR21
MFC1,2	PRT	K808/F7	
MFK	CM	K514/A2	C7L
MFK	CM	K514/C2	C7L
MFL	CM	K514/A3	C7L
MFL	CM	K514/D3	C7L
MFN	AMRST	L208/G3	Y-L
MFP	AMRST	L208/A6	WR26
MFR	AMRST	P108/E7	Y-24
MFS	AMRST	L208/F3	Y-24
MFS	AMRST	P108/G0	Y-24
MFST	AMRST	L108/A6	WR6
MFT	AMRST	L311/F1	WR28
MF1-4	AMRST	L223/A1-A4	WL34
MF5	AMRST	L220/F7	WL29
MIR	AMRST	P110/A4	Y-22
MIR1	AMRST	L107/A6	WR22
MIR2	AMRST	L109/A1	WR22
MIR2	AMRST	P110/B4	WR22
MISC	MTC	J104/B7	R6
MISC	MTC	J105/B7	R6
MJ	ALM	K115/A9	
MJ	ALM	K406/G3	
MJ	ALM	P318/B4	
MK	AMRST	L117/F3	Y-39
MK	AMRST	L235/D0	Y-39
MK	AMRST	P211/E0	Y-39
MKA(-)	MTFC	J108/D5	
MKA-	MTFC	J112/D5	
MKA-	MTFC	K707/C6	
MKA0	MTFC	J108/E2	
MKA0	MTFC	J112/D2	
MKA1(0)	MTFC	J108/D2	
MKA2(-)	MTFC	J108/D8	
MKA2(-)	MTFC	J112/D9	
MKA2(0)	MTFC	J108/D7	
MKA2(0)	MTFC	J112/D8	
MKB(-)	MTFC	J108/D5	
MKB-	MTFC	J112/D5	
MKB-	MTFC	K707/B6	
MKB-	MTFC	L309/A8	
MKB-	MTFC	P306/A8	
MKB0	MTFC	J108/E2	
MKB0	MTFC	J112/D2	
MKB1	MTFC	K707/B6	
MKB1(-)	MTFC	J108/D5	
MKB1(0)	MTFC	J108/E2	
MKB1(0)	MTFC	J112/D2	
MKB1-	MTFC	J112/D5	
MKB2(-)	MTFC	J108/D8	
MKB2(-)	MTFC	J112/D9	
MKB2(0)	MTFC	J108/D7	
MKB2(0)	MTFC	J112/D8	
MKR	AMRST	L320/D1	WR19
MKT(-)	MTFC	J108/F5	
MKT(-)	MTFC	J112/F4	
MKT0	MTFC	J108/F4	
MKT0	MTFC	J112/F4	
MKT0,1	AMRST	L310/G0	WL42
MKT0,1	AMRST	P308/G1	WL42
MKT1	MTC	J104/B4	R2
MKT1	MTC	J105/B4	R2
MKT1(-)	MTFC	J108/F6	
MKT1(-)	MTFC	J112/F7	
MKT1(0)	MTFC	J108/F6	
MKT1(0)	MTFC	J112/F6	
MKT2,3	MTC	J106/B8	R2,L45
MLF	DTM	K106/A4	13
MLVF	MTC	N109/H2	R9
MLVM	MTC	N109/G2	R9
MM	AMRST	P112/F0	Y-20
MM	AMRST	P212/B0	Y-20
MN	ALM	K306/A9	
MN	ALM	K307/A9	
MN	ALM	K407/A0,E0	
MN	CM	K412/F9	REL R
MN	ALM	K511/A0,D0	
MN	ALM	L230/G7	
MN	ALM	L325/D6	
MN	ALM	P206/B9	
MN-	ALM	K621/G7	
MNF	AMRST	L221/F4	RR2
MN1	CM	K412/E9	REL R
MON	MTFC	J108/B2	
MON	MTFC	J112/C2	
MON	MTFC	L309/C8	
MON	CM	L318/A7	C17R
MON	CM	P112/E5	C17R
MON	CM	P212/A6	C17R
MON	MTFC	P306/D8	
MON1	CM	L309/B6	C17R
MON1	CM	P306/C7	C17R
MOS	AMRST	P112/C0	Y-22
MOS1	AMRST	L107/E6	WR21
MOS2	AMRST	L109/B5	WR21
MO1	MTC	K708/E8	R3
MO1	MTC	K711/F5	R3
MP-	CM	K204/B8,B9	C2R
MP-	CM	K204/E8,E9	C2R
MP-	PCMB	K306/A6,C6,E6	
MP-	PCMB	K307/A7,C7,D7	
MP-	PCMB	K407/C1,C4,C9	
MP-	PCMB	K407/F1,F4,F8	
MP-	LL	K511/C2	
MP-	LL	K511/F1	
MP-	AMRST	P111/A1	Y-7,8,9
MPC	MTC	K712/D1	
MPC1,2	AMRST	P316/A1	Y-21
MPN	AMRST	P108/E7	
MPP	PC	K514/B7,E7	
MPR	MTFC	K707/A6	
MPR-	MTFC	J108/C5,C7,C8	
MPR-	MTFC	J112/C5	
MPR-	MTFC	K708/C9	
MPRO	MTFC	J108/C4	
MPRO	MTFC	J112/C4	
MPRO	MTFC	L309/B8	
MPRO	MTFC	P306/B8	
MPR1-	MTFC	J112/C8,C9	
MPR1-	MTFC	K708/C9	
MPS	AMRST	P111/D1	
MPT	MTC	K412/A2	R44
MPT	CM	K412/D6	REL R
MPTA	MTC	K412/B0	R44
MPO	CM	K204/B6,E6	C2R
MPO	AMRST	P111/F1	Y-7
MR	CM	K518/E4	C27R
MR	AMRST	L108/E2	WR25
MR	CM	M111/E4	C27R
MRA	CM	K518/G5	C27R
MRA	CM	K519/G5	C27R
MRA	CM	M111/G5	C27R
MRA	CM	M112/G5	C27R
MRL	DTM	K129/F5	11
MRL	CM	K129/F5	C15R
MRL	MTC	K708/D6	R4
MRL	MTC	K713/C1	R4
MRL1	CM	K711/B7	C18R
MS	MTC	J106/F1	R3
MS	MTC	K106/E1	R3
MSR	AMRST	P108/E0	Y-16
MSR1	AMRST	P108/F0	Y-16
MST	AMRST	L308/E2	WR17

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

ISSUE	DWG SIZE	APPARATUS INDEX
5	C2	
A704	SFD-10-01	BELL LABORATORIES

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RELAYS

DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *
MSTB	AMRST	L308/E2	WR30	NRR	AMRST	L326/A4	Y-11	ONR	AMRST	P108/C7	Y-39	OTL5	MTC	K111/F0	R7	PRB0-2	MTFC	J109/D2-D5	
MST1	AMRST	L308/D2	WR17	NRR	AMRST	P317/C1	Y-11	ONS	AMRST	L109/E5	WR6	OTS	DTM	K312/F4	32	PRB0-2	MTFC	J113/D2-D5	
MST1	OR	L308/E5		NS	MTC	K411/E1	R10	ONT1,2	AMRST	L109/C1	WR21	OTS	CM	K313/F4	C41R	PRL	CM	K514/B3	C7L
MST1	OR	P212/F6		NSI	CM	K203/B6	C23L	ONX	DTM	K106/G7	10	OTT	CM	K207/F0	C23L	PRL	CM	K514/D3	C7L
MS1	MTC	J106/G3	R3	NSS0-5	CM	K405/B8	T33R	ONX	CM	K117/G5	C4L	OTT	CM	K208/D4	C23L	PRL	MTC	K810/A2	R50
MT	CM	J123/A0	C19R	NST	MTC	K411/F6	R9	ON1	OS	K205/F9		OVC	CM	K413/B6	C29L	PRL	PRT	K810/A6	
MT	DTM	J123/C0	14	NST1	MTC	K411/E6	RR11	ON1	IR	L113/C0		OVC	CM	K607/A4	C29L	PRLL	CM	K514/A2	C7L
MT	AMRST	L318/A1	WR20	NS0	CM	K203/A6	C23L	ON1	OR	L208/B4		P	AMRST	L230/B9	Y-26	PRLL	CM	K514/E2	C7L
MTCP	MTC	J107/B5	L44	NT	CM	K412/E6	REL R	ON1	OR	P108/C4		P	AMRST	P207/A8	Y-26	PRLLA	CM	K514/A2	C7L
MTE	MTFC	J110/A3		NTB	MTC	K614/B3	R40	OP	AMRST	P210/F9	Y-37	PB	OGT	K314/D9		PRLLA	CM	K514/F2	C7L
MTE	MTFC	J114/A3		NTC	MTC	K614/E3	R40	OP1	AMRST	P210/G9	Y-37	PB	AMRST	L208/G0	WL40	PS	CM	K124/B5	T40R
MTL	MTFC	J119/B7		NTC1	MTC	K614/E3	R40	OR	MTC	J104/C3	R2	PBC	AMRST	P108/B4	RR6	PS	AMRST	L311/C1	WR16
MTP	MTFC	J108/C2		NTH	MTC	K614/B1	R40	OR	MTC	J105/C3	R2	PBN	CM	N108/G8	C32L	PS	CM	L311/C4	T40R
MTP	MTFC	J112/C2		NTR	MTC	K412/G5	R3	OR	CM	K118/A6	T51L	PBP	AMRST	L209/D0	WL28	PST	MTC	K810/C3	R50
MTP1	MTFC	J112/A2		NTT	MTC	K412/A2	R44	OR	CM	L121/A5	T51L	PBX	MTC	K409/G3	R39	PST	AMRST	L233/B4	Y-34
MTR	MTFC	J118/B9		NTT	CM	K412/A5	REL R	OR	CM	L311/G4	T51L	PBXA	CM	K607/C3	C27R	PST	AMRST	P213/B4	Y-34
MTR	MTFC	K707/C6		NT1	CM	K412/F9	REL R	OR	AMRST	P109/B8	Y-17	PC-	AMRST	P112/F5	WR39	PT	MTC	J104/F3	R50
MTR	AMRST	L326/G7	Y-11	NT4	CM	K412/B4	REL R	OR	P-REG	P317/D1		PCA0-14	AMRST	P112/B5	WR39	PT	MTC	J105/F4	R50
MTR	AMRST	P317/A2	Y-11	NVA	AMRST	L230/G4	Y-31	ORAB	AMRST	L219/C7	WR17	PCK	PRT	K810/F6		PTK	CM	K408/B2	C29L
MTR1	AMRST	L309/E6	Y-11	NVA	AMRST	P206/E4	Y-31	ORD	AMRST	L108/D2	WL25	PCL1,2	CM	K117/C3	C24L	PTP	MTFC	J109/B1	
MTR1	AMRST	P316/E4	Y-11	N1	MTC	J107/B3	R5	ORF	P-REG	P317/F1		PCN	MTFC	J110/B0		PTP	MTFC	J113/B1	
MTT	MTC	K208/G9	R4	N1	CM	K403/F2	T34R	ORH	AMRST	L320/A5	WR19	PCN	MTFC	J114/B1		PTP1	MTFC	J109/A2	
MTO	MTFC	J110/A4		N1	MTC	L107/E1	R5	ORIG	MTC	J104/B3	R2	PCO	AMRST	L110/A2	WR39	PTP1	MTFC	J113/A2	
MTO	MTFC	J114/A4		N1	CM	P313/B2	T35R	ORIG	MTC	J105/B3	R2	PCO	AMRST	P112/E5	WR39	PTR1	MTC	K810/E2	R40
MT1	DTM	K304/D0	14	N2	MTC	J107/D0	RR21	ORM	AMRST	P109/E8	Y-31	PCO(-)	MTFC	J121/D1		PTT0-2	MTFC	J109/F3-F5	
MT10	CM	K411/B8	T36R	N2	CM	P313/A3	T34R	ORM1	AMRST	P108/A6	Y-39	PCO-2	MTFC	J121/F1		PTT0-2	MTFC	J113/F3-F5	
MT12	CM	K208/F4	C19R	N2,3	CM	K403/E5	T34R,T33R	ORN	AMRST	P108/C0	Y-21	PC1	MTC	K810/A0	R51	PT0	AMRST	L234/A3	Y-25
MT2	CM	J123/B0	1190	N3	CM	P313/A3	T33R	ORON	AMRST	L208/E0	WR17	PC1(-)	MTFC	J121/D1		PT0	AMRST	P210/A2	Y-25
MT4,14,24	DTM	J107/G3	48,S-4	N4	CM	K403/F5	T33R	ORP	AMRST	L108/D2	RR3	PC1-14	AMRST	L110/B2	WR39	PT1	MTC	J104/G4	R50
MT5	DTM	K310/F5	33	N4	CM	P313/A3	T33R	ORP0-14	AMRST	L112/C7	WR39	PC14	AMRST	P112/F5	WR39	PT1	MTC	J105/F4	R50
MT5,6	CM	K311/F7	C39R,C40R	OA	CM	K116/A7	T38R	ORST	AMRST	L109/D5	WR17	PC2	MTC	K810/C0	R51	PU	MTC	K614/E0	R42
MT6	DTM	K310/E5	C40R	OA	IR	L113/D1		ORT	AMRST	L121/F5	WR28	PC3	MTC	K810/C0	R51	PU	CM	K621/E5	C25R
MT7	CM	K608/C4	C38L	OA	AMRST	L312/A2	WR31	ORT	AMRST	L311/G1	WR28	PD	CM	K124/B5	T40R	PU	IAO	M110/D4	
MT7	DTM	K608/C4	42	OA	CM	L312/B5	T38R	OS	TTL	M212/G4		PD	AMRST	L311/B1	WR16	PU	IT	M410/D4	
MT8	DTM	K104/G8	34	OAT	CM	J117/C1	C15R	OS	AMRST	P109/A8	Y-17	PD	CM	L311/B4	T40R	PU	IMGT	M510/D4	
MT8	CM	K105/G8	C36L	OAT	DTM	J117/F1	11	OS	P-REG	P317/E1		PD0	AMRST	L211/B0	WL36	PU1	MTC	K614/F1	R42
MT8A	DTM	K104/F8	36	OAT	CM	K115/D5	C15R	OSA	AMRST	L212/E9	WL41	PD1	AMRST	L211/C0	WL36	PW	PRT	K807/A1	
MT8A	CM	K105/F8	C27L	OAT1	CM	K129/F3	C15R	OSA	AMRST	L213/E9	WL41	PD11	AMRST	L211/C0	WL36	PW1	PRT	K807/B1	
MT8K	MTC	K104/C0	R35	OAT1	DTM	K129/G3	11	OSA	AMRST	L214/E8	WL41	PD9	AMRST	L211/E0	WL36	P1-6	AMRST	L233/A0-D0	Y-35
MT8K	MTC	K105/C0	R35	OB	CM	K116/C7	T39R	OSA	TTL	M212/G4		PE	AMRST	L240/E0	Y-13	P1-6	AMRST	P213/A0-D2	Y-35
MT9	CM	K307/H5	C44R	OB	IR	L113/D1		OSA1	AMRST	L212/E9	WL40	PE	AMRST	P212/E8	Y-13	P1Y	AMRST	L211/A0	Y-37
MXF	AMRST	L221/G4	RR2	OB	AMRST	L312/B2	WR31	OSA1	AMRST	L213/E9	WL40	PEA	AMRST	P212/E8	Y-20	P3A-5A	MTC	K604/G4,H4	R35
MXT	DTM	K712/E7	10	OB	CM	L312/C5	T39R	OSA1	AMRST	L214/E8	WL40	PG	AMRST	L221/C8	RR3	P6A	AMRST	L233/F0	Y-35
M0-9	CM	K412/B9-E9	REL R	OBS	CM	K624/G6	T47R	OSB	AMRST	L215/E1	WL41	PG1	AMRST	L221/D6	RR3	P6A	AMRST	P213/E0	Y-35
M0-9	AMRST	L310/F0	WL42	OBS1	DTM	K624/B6		OSB	TTL	M212/G3		PH	AMRST	L233/E0	Y-34	R	TL	K609/A0	
M0-9	AMRST	P308/F1	WL42	OC	DTM	K106/F7	22	OSB1	AMRST	L215/G4	WL40	PH	AMRST	L234/D8	Y-34	R	AMRST	L219/E1	WL23
M0,1,2,4	AMRST	L217/C8	RR8	OCN	CM	K118/G5	T39R	OSC	MTC	K203/H2	R43	PH	AMRST	P210/C4	Y-34	R	TTL	M211/C8,G8	
M7	OS	K207/G7		OC1	DTM	J106/G6	22	OSC	CM	K203/H5	C22L	PH	AMRST	P213/E0	Y-34	R+	TT	M109/F6	
M7	OS	L123/E8		OC1	DTM	K106/D4	22	OSC	AMRST	L215/E2	WL41	PHC	CM	K116/C7	T39R	R+	TT	M409/E4	
M7	AMRST	L217/C8	RR8	OF	AMRST	L220/A2		OSD	AMRST	L215/E2	WL41	PK	CM	K124/A5	T40R	R+	TT	M509/E7	
M7	OS	P313/G7		OF	OS	L239/A9,C9		OSE	CM	K206/E7	C19L	PK	CM	L121/D5	T40R	R-	CM	K117/F6	RR-
N	MTC	J107/B3	R5	OF	NG	N108/E5		OSE	AMRST	L215/E3	WL41	PK	AMRST	L121/G5	WR16	R-	OSGR	K206/F4	
N	MTC	L107/D1	R5	OF	OS	P207/D2		OSE1	CM	K205/D7	C19L	PK	AMRST	L311/A1	WR16	R-	TT	M109/E7	
NA	MTC	K120/D1	R7	OF	OS	P208/F2		OSF	AMRST	L215/E4	WL40	PK	CM	L311/B4	T40R	R-	TT	M409/D5	
NA1	MTC	K120/E1	R7	OFK	CM	N108/E8	C32L	OSF	P-REG	P317/G1		PK	TT	M008/B1		R-	TT	M509/D8	
NB	MTC	K120/E1	R7	OGC	CM	K203/H6	C32L	OSG	AMRST	L215/E4	WL40	PK	TT	M108/B1		RA	MTC	K606/D9	R36
NBL	AMRST	L108/C6	WR26	OGT	MTC	J104/A7	R6	OSGA0-11	OSC	K204/A7		PK	TT	M208/B1		RA	TL	K609/A0	
NB1	MTC	K120/F1	R7	OGT	MTC	J105/B7	R6	OSGB0-11	OSC	K204/G7,H7		PK	TT	M210/B1,F1		RAA	AMRST	L233/H0	Y-33
NC	MTC	K120/F1	R7	OGT	TT	M009/G5		OSG0-11	MTC	K203/B2	R12	PK	TT	M308/B1		RAA	AMRST	P213/G0	Y-33
NC1	MTC	K120/F1	R7	OGT	TT	M609/F6		OSG0-11	CM	K203/B6	C17L-C23L	PK	TT	M409/G7		RAP1-5	MTC	K606/D4-G4	R36
ND	MTC	K120/G1	R7	OGT	TT	M709/E0		OSH	AMRST	L215/E5	WL40	PK	TT	M508/B2		RAV	MTC	K606/A3	R35
NDI	CM	K208/B4	C23L	OH	AMRST	L113/A6	WR27	OSJ	AMRST	L215/E6	WL40	PK	TT	M608/C1		RAV1	DTM	K607/F3	21
NDK	CM	K208/B7	C23L	OK	AMRST	L325/C0	WR23	OSK	MTC	K203/G2	R12	PK	TT	M707/D6		RAV1,2	CM	K607/B6	C36R
NDK	AMRST	L315/G1	WR30	ON	MTFC	J122/E5		OSK	CM	K203/G5	C19L	PL	AMRST	L239/F5	WR16	RA0-8	MTFC	J121/E3	
NDT	AMRST	L108/D6	WR32	ON	OS	K205/E9		OSK	AMRST	L215/E6	WL40	PLN	AMRST	P212/C1		RA0-8	MTFC	K707/F6	
ND1	MTC	K120/G1	R7	ON	TRC	K707/B0		OSKA	CM	K203/D7	C18L	PLN1	AMRST	P212/D1		RA1	AMRST	L236/A2	Y-34
NE	CM	K403/A6	T36R	ON	MTFC	K707/G5,H6		OSL	AMRST	L215/E7	WL40	PLS	AMRST	L222/A1	WR16	RA1	AMRST	P213/E5	Y-34
NE	CM	P313/H4	T36R	ON	OS	L208/C4		OSM	AMRST	L215/E8	WL40	PMO	CM	K413/B6	C23L	RA1-5	MTC	K606/A3-C3	R35,R36
NGB	CM	K407/H1,H4,H8	C29L	ON	IR	L208/D4		OST	AMRST	L108/G6	WR23	PMO	CM	N108/F8	C23L	RA1-6	CM	K311/C3-F3	C37R
NGC	CM	K406/G4	C27L	ON	MTFC	L309/E8		OS0-4	CM	K205/A1-C1	C19L	POR1	AMRST	L107/C3	WR14	RA1'-RA5'	MTC	K606/B3-D3	R35,R36
NGK	CM	K406/D3	C31L	ON	OR	P108/C4		OT	DTM	K310/C2	33	POR2	AMRST	L108/B2	WR14	RB	TL	K609/B0	
NGK1	CM	K406/D3	C31L	ON	OS	P108/D4		OT	CM	K311/A7	C41R	PPR0-2	MTFC	J109/B2-B5		RB	IR	L112/A0	
NGT	MTC	K414/B2	R41	ON	IR	P108/F4		OT	DTM	K312/F4	33	PPR0-2	MTFC	J113/B2-B5		RBN-	AMRST	P114/A7	WR39
NGTA-H	CM	K414/C5	P25	ON	MTFC	P307/G7		OT	CM	K313/F4	C41R	PR	MTC	J107/B5	L44	RBT	CM	K607/D3	C36R
NN	CM	K412/F6		ONM1,2	AMRST	P108/F0	Y-20	OTL1	MTC	K111/E0	R10	PR	AMRST	L220/E7	WL34	RBT	AMRST	L209/B0	WR19
NOB	CM	K624/G6	T47R	ONN	CM	K316/B6		OTL1	MTC	L120/E1	R10	PRA0-2	MTFC	J109/D3-D6		RBT	CM	L319/C7	C36R
NR	CM	K408/F0	C31L	ONR	AMRST	L109/E1	Y-39	OTL2	MTC	K108/H3	R10	PRA0-2	MTFC	J113/D3-D6		RBT1	MTC	K606/G8	R4

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

APPARATUS INDEX

DWG SIZE	ISSUE
C2	5

BELL LABORATORIES SFD-10-01 A705

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RELAYS

DESIG	CKT	LOC	EQPT LOC *
RB0	IRL	L112/E2	
RB1	AMRST	L112/E8	WR27
RB2	AMRST	L112/F5	WR27
RB3	AMRST	L112/F8	WR27
RC	AMRST	J103/B5	WL39
RC	MTFC	J110/C4	
RC	MTC	K623/B1	R39
RC	AMRST	L219/G5	WR27
RC	IAO	M110/E5	
RC	IT	M309/G0	
RC	IT	M410/F5	
RC	IMGT	M510/F5	
RC-	MTFC	J110/C7,C8	
RC-	MTFC	J114/C7,C8	
RC-EMG	MTFC	J114/C4	
RC-0	MTFC	J114/C6	
RCCK	PRT	K808/E3	
RCK	MTC	K409/E0	R9
RCK	MTC	N113/B0	R9
RCK1	CM	K623/B5	C33L
RCK1	IAO	M110/D9	
RCK1	CM	M410/E8	C33L
RCK1	CM	M510/D8	C33L
RCK2	CM	K623/D5	C33L
RCK3	CM	K623/C7	C33L
RCL	CM	K409/G6	
RCL	CM	N113/F7	C30L
RCN1-15	CM	N108/D8	C50L
RCR-	MTFC	J110/A8,A9	
RCR-	MTFC	J114/A8,A9	
RCR-EMG	MTFC	J110/A5	
RCR-EMG	MTFC	J114/A5	
RCRO	MTFC	J110/A6	
RCRO	MTFC	J114/A6	
RCTA	DTM	K620/B8	24
RCTA	CM	K621/A7	C26R
RCTB	DTM	K620/B8	24
RCTB	CM	K621/B7	C26R
RCT1-15	CM	K409/B6-F6	C34L,C35L
RCT1-15	CM	N113/A7-E7	C34L,C35L
RCY	MTC	K606/A3	R6
RCY	CM	K607/B2	C37R
RCY	DTM	K607/F2	21
RCY1	CM	K607/A2	C37R
RCY1	DTM	K607/F3	21
RC0	MTFC	J110/C6	
RDL	CM	K607/D5	C17R
REC	MTC	K711/G4	R3
REC1	AMRST	L325/A7	WR7
REP	MTC	J117/A3	RR29,L44
REP	MTC	L325/B9	RR29,L44
RF	CM	K607/C7	C38R
RF	TL	K609/F0	
RFA	CM	K607/D7	C38R
RGT	CM	K127/F5	T38R
RI	MTC	K413/D3	R38
RI	CM	K413/E6	C31L
RK	CM	K609/D3	C31R
RK	DTM	K609/D3	23
RK1	DTM	K611/F4	31
RK2	DTM	K611/E0	31
RK3	DTM	K611/C4	31
RL	OR	L319/A9	
RL	IAO	M110/E7	
RL	IT	M410/F6	
RL	IMGT	M510/F5	
RLK	PRT	K810/B6	
RLK	IR	L114/C8 F8	
RM	MISC	K707/E0	
RM	MTFC	K707/E6	
RMA	MTFC	K707/E6	
RM1	MTFC	J123/D1	
RM1	MTFC	K707/G6	
RM1	MTFC	P307/G7	
RM1A	MTFC	K707/G6	
RM	AMRST	P316/A4	Y-20
RMA	MTFC	J110/G8	
RNA	MTFC	J114/G8	
RNG	CM	K408/A0	C30L
RON	DTM	J108/C7	
RON	CM	J108/F0	C19R
RON	DTM	J112/C7	
RON	CM	J112/F0	C19R
RON	MTFC	J118/B9	
ROT	MTC	K624/D4	R43
RP	CM	K125/F7	T51L
RP	CM	L121/D5	T51L
RP	AMRST	L121/F5	WR16
RP	AMRST	L311/D1	WR16
RP	CM	L311/D4	T51L
RPD	AMRST	L219/D7	WR14
RPE1	AMRST	P108/C7	Y-20
RPE2	AMRST	L308/C2	WR23
RPR-	MTFC	J110/B7,B8	
RPR-	MTFC	J114/B7,B8	
RPR-EMG	MTFC	J110/B4	
RPR-EMG	MTFC	J114/B4	
RPRO	MTFC	J110/B6	
RPRO	MTFC	J114/B6	
RPS	AMRST	L209/A0	WR14
RPSA	AMRST	L209/B0	WL5
RPS1	AMRST	P108/C6	Y-21
RPS2	AMRST	L308/B2	WR23
RPO	IRL	L112/A2	
RRK	CM	K124/E5	T40R
RR1	MTFC	J123/E1	
RSH	MTC	K623/A1	R39
RSK	CM	K622/G5	C33L
RS0-9	MTC	K622/A3-G3	C35L
RS0-9	CM	K622/A5-F5	C35L
RT	IAO	M110/C4	
RT	IT	M410/C4	
RT	IMGT	M510/C4	
RTC	AMRST	L109/F5	Y-52
RTC1	AMRST	L117/G5	Y-12
RTC1	AMRST	P307/G4	Y-12
RTC2	AMRST	L117/F3	Y-12
RTC2	AMRST	P307/C2	Y-12
RTST	CM	L319/D7	C17R
RTOS	MTFC	K707/F6	
RT1	MTFC	J123/D1	
RV	IR	L114/D8,H8	
RV	AMRST	L241/A0	WR7
RV1	CM	K505/A8	C29L
RV1	CM	K506/D9	C29L
RV1	IR	L113/F1	
RV2	CM	K505/F8	C29L
RV2	CM	K508/F9	C29L
RX	TL	K609/B0	
RYC	DTM	K106/B7	21
RYC	CM	K607/C3	C37R
RYT	DTM	K129/B2	12
RYT	CM	K129/B2	C16R
RYT1	CM	K129/B4	C16R
RYT1	DTM	K129/B4	C16R
RO	CM	K118/B6	T51L
RO	OS	K206/F3	
RO	OS	K624/D9	
RO	AMRST	L312/E2	WR30
RO	CM	L312/E5	T51L
RO-8	MTFC	J121/E3,G3	
RO-8	MTFC	K707/F6	
ROS	MTFC	K707/D5	
R1	AMRST	L218/H4	WL23
R1(1)	TTL	M211/F9	
R1(2)	TTL	M211/G9	
R2	AMRST	L218/H6	WL24
S	AMRST	L219/A1	WL23
S	OGT	M008/B7	
S	IAO	M108/B7	
S	OGIT	M208/B7	
S	OGT	M210/B7,E7	
S	IT	M211/B4,F4	
S	T-TERM	M212/B6	
S	OGT	M308/B7	
S	IT	M309/B4	
S	ITTL	M309/D8	
S	IT	M408/B5	
S	TT	M409/F3	
S	IMGT	M508/B7	
S	TT	M608/B2	
S	TT	M709/C3	
S(1)	TTL	M211/C8	
S(2)	TTL	M211/G8	
S-	OSC	K206/A1	
SA	TL	K609/G1	
SA0-8	MTFC	J121/E3	
SA0-8	MTFC	K707/F6	
SA1-	OSC	K206/B3	
SA2-	OSC	K206/B3	
SB	OS	K205/G9	
SB	MTC	K606/B7	R5
SB	TL	K609/H1	
SB	OS	L117/C2	
SB	OS	P114/C9	
SB1-	OSC	K206/B3	
SB2-	OSC	K206/B3	
SCBA0-3	CM	K203/B8	C16L,C17L
SCBB0-3	CM	K203/C8	C16L,C17L
SCCK	CM	K124/F9	T51L
SCK	CM	K124/C5	T40R
SCK	CM	L121/E5	T40R
SCK	AMRST	L121/H5	WR16
SCK	AMRST	L311/C1	WR16
SCK	CM	L311/D4	T40R
SCN	CM	K124/D5	T40R
SCT	CM	L309/C6	C17R
SCT	CM	P306/C7	C17R
SC1	AMRST	P212/G3	Y-38
SC1-	OSC	K206/B3	
SC2-	OSC	K206/B3	
SD	MTC	K807/C6	R51
SD	T-TERM	M212/B9	
SDR	MTC	J104/E3	R2
SDR	MTC	J105/D3	R2
SDT	MTC	J104/G3	R4
SDT	MTC	J105/F3	R4
SDT	DTM	K128/G3	12
SDT	CM	K128/G3	C16R
SEF	TL	K609/G0	
SEL	TL	K609/C0	
SER	TL	K609/A0	
SF	CM	K128/B3	C15R
SFT	CM	K128/B3	C16R
SFT	DTM	K128/C3	12
SFT	AMRST	L108/E6	WR32
SF1	AMRST	L221/F4	RR2
SG-	AMRST	P112/C5	Y-6
SG0	AMRST	P112/B5	Y-6
SG10	AMRST	P112/C5	Y-6
SG11	AMRST	P112/E5	Y-6
SHK	CM	K205/F3	C21L
SHKA	CM	K205/E6	C22L
SIA	CM	K203/D5	C18L
SIB	CM	K203/E5	C18L
SK	CM	K314/C5	C20L
SKA	CM	K204/D4	C18L
SKB	CM	K204/F4	C18L
SKT	MTFC	J119/E6	
SL	DTM	K616/E8	26
SL	CM	K617/D9	C29R
SL	MTC	K617/G6	R42
SLA	DTM	K616/F8	27
SLA	CM	K617/E3	C30R
SLCK1	CM	K411/B6	C28L
SLK	CM	K205/G4	C21L
SLK	MTC	K411/F2	R10
SLKT	MTC	K411/H6	R10
SLK1,2	CM	K206/F7	C22L
SLRK	CM	K117/E7	C30R
SLRK	CM	K613/B3	C30R
SLRK	DTM	K613/F6	27
SL0-9	CM	K411/B2	T35R
SL0-9	CM	M309/H5	T35R
SL1	VM TST	N008/E6	
SL2	VM TST	N008/F6	
SNG1,2	CM	K406/F4	T39R,C31L
SNK	CM	K309/G5	37R
SOG1,2	CM	K117/D3	C24R
SON	CM	K203/C5	C22L
SON	AMRST	P112/A0	Y-22
SON1	AMRST	L117/B0	Y-13
SON1	AMRST	P112/C0	Y-13
SP	DTM	K708/A0	23
SP	CM	K711/C4	C35R
SP	AMRST	L220/D7	WL30
SP	SR	L232/G0	
SP	OS	L239/F8	
SP	OS	P108/E4	
SP	SR	P209/G0	
SPB	AMRST	L223/D1	RR3
SPE	AMRST	L240/C4	WR5
SPE1	AMRST	L240/A0	Y-13
SPE1	AMRST	P212/D8	Y-13
SPF	AMRST	L221/G4	RR2
SPH	CM	K412/F6	REL R
SPL	CM	K116/A7	REL R
SPL	AMRST	L313/A1	WR31
SPL	CM	L313/B4	REL R
SPL1	CM	K116/A7	REL R
SPRO-14	AMRST	L110/A7	WR39
SPRO-14	AMRST	P112/A5	WR39
SPT	AMRST	L209/B5	WR15
SP1	CM	K711/C4	C34R
SP1	AMRST	L223/E1	WL29
SP2	MTFC	K614/F7	
SP2	AMRST	L223/E1	WL29
SP5	AMRST	L223/E1	WL28
SR	MTC	K810/B0	
SRG	AMRST	L225/G2	WL25
SRK	CM	K623/E5	C33L
SRT	IMGS	K206/C6	
SRT	IMS	K624/F7	
SRT1	MTC	J104/D4	R2
SRT1	MTC	J105/D4	R2
SRT2	MTC	J106/D8	R2
SSA	CM	K203/F5	C19L
SSA,B	MTC	K203/F2	R19
SSAA	MTC	K203/F2	R12
SSB	CM	K203/G5	C19L
SSBA	MTC	K203/G2	R12
SSP	AMRST	L220/D7	WL30
SST1	MTC	K206/E0	R12
ST	MTC	J103/A7	R3
ST	TRC	J122/D8	
ST	TRC	K707/B0	
ST	TT	M009/E5	
ST	TT	M109/F4	
ST	TT	M208/E6	
ST	TT	M308/C1	
ST	TT	M408/G7	
ST	TT	M509/E2	
ST	TT	M609/E6	
ST	TT	M709/E2	
STK	AMRST	L109/E5	WR26
STK	AMRST	L220/F4	WR26
STM	AMRST	P108/A0	Y-21
STM1	AMRST	P108/B0	Y-17
STM2	AMRST	P109/F8	Y-16
STP	DTM	K604/D9	42
STP	MTC	K604/F0	R35
STP	CM	K605/C9	C38L
STP	MTC	K605/G0	R35
STP	AMRST	L108/G2	WL34
STP	AMRST	L220/D4	WL34
STPA	CM	K514/A3	C7L
STPA	CM	K514/D3	C7L
STPA	MTC	K514/G2	R35
STPA	CM	K605/D6	C7L
STP1	DTM	K106/E7	42
STP1	CM	K117/B7	C38L
STP1	DTM	K604/A8	42
STP1	CM	K605/A8	C38L
STP1	MTC	K605/F1,G1	
STP2	DTM	K604/F2	42
STP2	CM	K605/F2	C38L
STP2A	DTM	K604/E2	S-5
STP2A	CM	K605/E2	C11R
STP3	DTM	K604/E9	42
STP3	CM	K605/C9	C38L
STRG	AMRST	P215/E1	RR6
STR1,2	TRC	J122/B7,C7	
STR1,2	TRC	K707/A0	
STS	OS	K208/A9	
STS	AMRST	L235/D8	Y-38
STS	AMRST	P211/D8	Y-38
STS1	OS	K208/A9	
STT	AMRST	L107/A3	WR23
STX	CM	K713/D6	C9L
ST7	AMRST	L237/E9	Y-38
ST7	AMRST	P217/C9	Y-38
SW	PRT	K807/B1	
SW1	PRT	K807/C1	
SY	AMRST	L219/B5	WL24
SY1	AMRST	L219/A5	WL24
S0	OT&P	M209/E6	
S0-8	MTFC	J121/E3,G3	
S0-8	MTFC	K707/F6	
S1	OGT	M008/E7	
S1	IAO	M108/D8	
S1	OGIT	M208/D8	
S1	IMGT	M508/D7	
S1,2	VM TST	K105/G6,H6	
S1,2	VM TST	K313/A2	
S1,2	VM TST	N008/D5,F5	
T	TT	M009/D2	
T	IT	M410/G5	
T	TT	M609/E1	
T	TT	M709/F0	
T	VM TST	N009/C1	
T+	TT	M109/D6	
T+	TT	M409/D4	
T+	TT	M509/D7	
T-	TT	M109/C7	
T-	TT	M409/C5	
T-	TT	M509/C8	
TA	AMRST	L125/C6	Y-14
TA	AMRST	L325/E0	Y-14
TAC	AMRST	L208/A2	WR20
TAC1,2	AMRST	L208/C0,D0	WR20
TAL	CM	K115/B5	C18R
TAN	MTC	K116/G2	R37
TAN	TT	M609/F6	
TAN	TT	M709/F2	
TAN3	TT	M709/G2	
TAP1	AMRST	P115/B8	Y-16
TAP2	AMRST	P115/C7	Y-16
TB	MTC	K606/C7	R5
TBC	CM	K311/G7	C44R
TBE	MTMG	J110/F3	
TBE	MTMG	J114/F3	
TBI	CM	K413/G6	C31L
TBI	MTC	K413/H3	R38
TBK	DTM	K312/H5	44
TBK	CM	K313/G5	C44R
TBL	AMRST	L326/A0	WR23
TBSK	MTC	K414/A2	R40
TBS0-3	CM	K414/A6	C10R
TBT	DTM	K306/E3	45
TBTA	DTM	K129/A9	45
TBTA	CM	K129/A9	C45R
TB0	MTMG	J110/F3	
TB0	MTMG	J114/F3	
TB0	TL	K312/G8	
TB0-5	TL	K313/F8	

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

ISSUE	DWG SIZE	APPARATUS INDEX
5	C2	
A706	SFD-10-01	BELL LABORATORIES

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RELAYS

DESIG	CKT	LOC	EQPT LOC •
TB0-9	CM	K311/D0	C43R,REL R
TB0-9	TL	K313/F8	
TB1	AMRST	L240/B0	WR4
TB2	AMRST	L238/B0	WR7
TC	CM	K314/E5	T42R
TC	MTC	K623/E1	R39
TCA,B	CM	K116/G7	T50L
TCA,B	AMRST	L312/E2,F2	WL24
TCA,B	CM	L312/F5,G5	T50L
TCBT	MTC	J107/G5	R11
TCC	CM	K314/D5	C20L
TCHK	DTM	K604/G2	23
TCHK	CM	K605/H2	C31R
TCHK	DTM	K608/G4	23
TCH0-9	CM	K608/A9-G9	C21R
TCH0-9	DTM	K608/A9-G9	16
TCK	CM	K623/E5	C33L
TCK	CM	M410/F8	C33L
TCK	CM	M510/F8	C33L
TCL0-14	AMRST	L112/D4	WR39
TCT	AMRST	L241/D0	WR9
TC1	MTC	K106/F1	R3
TC1	IR	L308/A6,B6	
TE	CM	K311/B7	C39R
TE	CM	K313/F3	C39R
TEA	CM	K405/E0	C33R
TER1,2	CM	K117/D2	C34R
TFK1-3	CM	K307/C3,D3	C44R
TFK1,2	DTM	K306/C3,E3	44
TFT	IR	L113/F1	
TF0,1,2,4,7	CM	K127/B4-E4	C43R
TF0,1,2,4,7	CM	K307/E6	C43R
TF0,1,2,4,7	IR	L113/F1	
TF0,1,2,4,7	AMRST	L314/D1-G1	WL48
TF0,1,2,4,7	CM	L314/D4-G4	C43R
TF0,1,2,4 7	AMRST	P309/B1	WL48
TF0,1,2,4,7	CM	P309/B4	C43R
TG	AMRST	L114/A0	WR29
TG	AMRST	L228/C6	WR29
TG	OS	L239/A9,C9	
TG	OS	P207/D2	
TG	OS	P208/F2	
TGCK	DTM	K616/D8	26
TGCK	CM	K617/D8	C29R
TGP	CM	K311/B0	C42R
TGS	CM	K311/A0	C42R
TGS1	CM	K207/B0	T44R
TGT	CM	K711/B6	C23L
TG0-9	CM	K311/A1,B1	C42R
TG1-3	AMRST	L238/A0-E0	WR8
TG3'	AMRST	L238/E0	WR8
THC	CM	K116/B7	T39R
TH0,1,2,4,7	CM	K403/A5	T34R
TH0,1,2,4,7	CM	P313/F3	T34R
TIM	CM	K316/B6	C26L
TK	DTM	K604/F2	23
TK	CM	K605/F2	C31R
TK	AMRST	L239/A1	WR8
TKR	AMRST	L238/C0	WR7
TKS	MTC	J107/G5	R35
TKT	MTC	J104/B9	R5
TKT	MTC	J105/B8	R5
TKT1-3	MTC	J106/E8,F8	R5,R37
TK1	AMRST	L238/F0	WR8
TLC	DTM	K106/C7	21
TLC1,2	CM	K117/C7	C32R
TLG	AMRST	L117/F5	Y-12
TLG	AMRST	P307/F4	Y-12
TLM	MTC	K616/G7	L45
TLN	MTC	K617/F8	L45
TM	PRT	J117/A3	
TM	MTFC	J117/C9	
TM	CM	J117/D2	C20R
TM	DTM	J117/G2	15
TM	CM	K115/A7	C20R
TM	MTFC	K115/E0	
TM	LL	K520/D5	
TM	MTFC	K810/E5	
TM	PRT	K810/F7	
TM	AMRST	L125/E3	Y-13
TM	OGT	M608/C8	
TM	OGT	M708/C8	
TM	AMRST	P115/F2	Y-13
TMA,B	AMRST	L125/C1	Y-14
TMA,B,C	AMRST	P115/B0-D0	Y-14,RR6
TMN	AMRST	L241/A5	WR8
TMS	DTM	K129/C0	12
TMS	CM	K129/C0	C16R
TMS	T-TERM	M212/C9	
TMT	AMRST	L238/G0	WR7
TMX	AMRST	L241/D5	WR8
TM1	MTFC	J118/D5	
TM1	LL	K520/D6	
TM1,2	MTFC	J118/E8,F8	
TM1,2	AMRST	L125/B1	Y-14
TM1,2	TT	M210/D1	
TM1,2	AMRST	P115/B0	Y-14
TM1A	TT	M210/D1	
TNA	CM	K414/B5	P26
TO	AMRST	L234/B7	Y39
TO	AMRST	P210/B4	Y39
TOC	MTC	K317/C1	
TOG1,2	CM	K117/B3	C34R
TP	CM	K125/F7	T51L
TP	CM	L121/D5	T51L
TP	AMRST	L121/G5	WR16
TP	AMRST	L311/E1	WR16
TP	CM	L311/E4	T51L
TPE	MTFC	J110/B2	
TPE	MTFC	J114/B2	
TPK	CM	K314/A5	T43R
TPK	AMRST	L224/D6	WR15
TPK1	AMRST	L209/E5	WR15
TPT	AMRST	L209/D5	WR15
TPT1	AMRST	L209/C5	WR15
TPYK	CM	K314/B5	C20L
TP0	MTFC	J110/B3	
TP0	MTFC	J114/B3	
TP00	IRL	L112/C2	
TR	PCMB	K306/E9	
TR	PCMB	K307/D9	
TR	PCMB	K407/A6,E6	
TR	LL	K511/A7	
TR	LL	K511/D7	
TR	PRT	K810/C6	
TR	AMRST	L326/D0	Y-38
TR	T-TERM	M212/C8	
TR	AMRST	P316/G4	Y-38
TR-	PCMB	K306/D9	
TR-	PCMB	K307/C9	
TR-	PCMB	K407/A6,E6	
TR-	LL	K511/A5	
TR-	LL	K511/D5	
TRA	CM	K115/C5	C18R
TRA	TL	K317/E7	
TRB	DTM	K708/B9	14
TRB	PRT	K808/B7	
TRB	AMRST	L109/D5	Y-11
TRB	AMRST	P317/D7	Y-11
TRBA	PRT	K808/B6	
TRB1	PRT	K808/B9	
TRB1,2	CM	K707/B9,C9	C18R
TRC	MTFC	J122/A2	
TRC	MTFC	K707/A4	
TRC	TRC	K707/C0	
TRC	AMRST	L326/B4	Y-12
TRC	AMRST	P316/D4	Y-12
TRC1,2	MTFC	J122/B3	
TRC1,2	MTFC	K707/B5	
TRL	MTC	K107/B3	R4
TRL	DTM	K708/A7	14
TRL	CM	K711/C8	C18R
TRL	MTC	K712/A3	R4
TRL	MTC	K713/B1	R4
TRL	PRT	K808/B9	
TRLP	DTM	K708/A7	
TRR	DTM	K708/B5	14
TRR	CM	K711/B5	C18R
TRR1	AMRST	L235/A9	Y-12
TRR1	AMRST	P211/A9	Y-12
TRR1,2	AMRST	L325/D0	Y-12
TRR1,2	AMRST	P316/C4,F4	Y-12
TRS	DTM	K107/D6	13
TRS	CM	K117/G3	C19R
TRS	DTM	K712/C6	13
TRS	PRT	K808/B2	
TRS	AMRST	L235/D9	Y-38
TRS	AMRST	P211/D9	Y-38
TRSA	CM	K711/A4	C19R
TRST	DTM	K708/B7	14
TRST	CM	K711/A8	C19R
TRST	PRT	K808/A9	
TRT	DTM	K128/C8	11
TRT	CM	K128/C8	C15R
TRT	AMRST	L320/C1	WR18
TRTR	DTM	K128/B9	11
TRTR	CM	K128/B9	C15R
TRT1	AMRST	L320/A1	WR19
TR1	DTM	K708/B0	14
TR1	CM	K711/B4	C16R
TR2	CM	K117/F4	C35R
TR2	PRT	K808/A2	
TR2	AMRST	L326/E0	WR4
TR2	AMRST	P316/G4	WR4
TR2A	DTM	K712/C7	22
TR2A,B	DTM	K107/D6	22
TR2B	CM	K117/F5	C35R
TR2B	DTM	K712/C7	22
TR2C	CM	K117/F5	C27R
TS	MTFC	J118/D1	
TS	MTC	J119/A3	R4
TS	TT-REG	J119/C3	
TS	MTFC	J119/E7	
TS	TT	M109/D4	
TS	TT	M210/G1	
TS	TT	M409/D1	
TS	TT	M509/C6	
TS	ITT	M708/C3	
TSC6	CM	K116/F7	T50L
TSE1,2	DTM	K310/F5,G5	33
TSE1,2	CM	K311/F7,G7	C39R,C40R
TSK	MTC	K312/B4	R35
TSK	MTC	K313/B4	R35
TSR	AMRST	L109/E1	WR20
TST	TL	K312/A8	
TST	TL	K313/B8	
TST	AMRST	L313/D1	WR25
TST	CM	L313/D4	C17R
TST	CM	M410/G8	C17R
TST	CM	M709/E6	C17R
TS0-4	DTM	K310/C2-F2	33
TS0-9	CM	K311/A4-F4	C40R
TS1	MTC	J119/B3	R52
TS2-10	MTC	J119/A0-F0	R52
TT	TRK	K208/D9	
TTK	CM	K207/G0	C23L
TTK	CM	K208/C4	C23L
TTL	MTFC	J119/D7	
TTL	MTC	K119/G2	R8
TTL1,2	MTC	K119/D2,E2	R8
TTM	TL	K208/D8	
TTP	MTFC	J111/B1	
TTP	MTFC	J115/C2	
TTP1	MTFC	J111/B2	
TTP1	MTFC	J115/B3	
TT0-4	DTM	K312/B3-D3	32
TT0-9	CM	K313/B3-D3	C39R
TT0,1,2,4,7	AMRST	P310/C1	WL44
TV	MTC	J104/F7	R49
TV	MTC	J105/F7	R49
TVA-	MTFC	J111/D2	
TVA-	MTFC	J115/E2	
TVB-	MTFC	J111/E2	
TVB-	MTFC	J115/E2	
TVP-	MTFC	J111/B6,B7	
TVP-	MTFC	J115/C7,C8	
TVP0	MTFC	J111/B4	
TVP0	MTFC	J115/C5	
TVT-	MTFC	J111/E5,E6	
TVT-	MTFC	J115/E6,E7	
TVT0	MTFC	J111/E4	
TVT0	MTFC	J115/E5	
TV1	MTC	J104/G9	R49
TV1	MTC	J105/F8	R49
TW	CM	K311/E0	C41R
TWT	AMRST	L220/E4	WL34
TZ	CM	K311/E1	C41R
T0-3	MTFC	J120/G3-F6	
T0,1,2,4,7	CM	K403/B5	T33R
T0,1,2,4,7	CM	P310/D4	T33R
T0,1,2,4,7	CM	P313/G3	T33R
T12	JLK	P316/A7	
T2-7	MTFC	J121/C5-C8	
UC	CM	K406/B4	T36R
U0,1,2,4,7	CM	K403/B5	T36R
U0,1,2,4,7	CM	P310/E4	T36R
U0,1,2,4,7	CM	P313/G3	T36R
VCI	CM	K413/D6	C33R
VER1	MTC	K118/C0	R9
VER1	MTC	N107/F5	R9
VER2	MTC	N107/F1	R9
VER6	MTC	N107/E8	R9
VER7	MTC	K105/E0	R10
VER7	MTC	N107/E1	R10
VER8	MTC	K105/F0	L45
VER8	MTC	N107/A5	L45
VER9	MTC	N107/F5	L45
VFA,B,C	LL	K516/E8	
VFA,B,C	LL	K517/D8	
VFA,B,C	LL	K518/F7	
VFA,B,C	LL	K519/G7	
VFA,B,C	LL	N111/F7	
VFA,B,C	LL	N112/G7	
VFG	DTM	K112/G6	36
VFK	MTC	K508/E0	R9
VFK	MTC	N109/F3	R9
VFL	CM	K505/F3	C30L
VFL	CM	K508/F6	C30L
VFL	CM	N110/F4	C30L
VFN0-4	CM	N108/D8	C50L
VFT0-4	CM	K505/F1	C46L
VFT0-4	CM	K508/D6,E6	C46L
VFT0-4	DTM	K512/A7-D7	36
VFT0-4	CM	N110/F3	C46L
VF0-4	CM	K113/F7	C46L
VF0-4	OS	K113/F9	
VF0-4	CM	L120/B5	C46L
VF0-4	OS	L120/C8	
VF0-4	AMRST	L120/F4	WL44
VF0-4	AMRST	L310/F9	WL44
VF0-4	CM	L310/F4	C46L
VF0-4	AMRST	P308/E1	WL44
VF0-4	CM	P308/F5	C46L
VF0-4	AMRST	P310/E1	WL44
VGA	MTC	K110/H4	R11
VGB0-11	LL	K513/F8	
VGB0-11	LL	K516/G8	
VGB0-11	LL	K517/E8	
VGB0-11	LL	K519/G7	
VGB00-11	LL	K518/G7	
VGB00-11	LL	N111/G7	
VGB00-11	LL	N112/H7	
VGC0-11	LL	K516/H8	
VGC00-11	LL	N111/H7	
VGC00-11	LL	N112/H7	
VGG1,2	DTM	K110/F6,G6	29
VGK	MTC	K110/B0	29
VGK	MTC	K507/A0	29
VGK	MTC	N109/D3	29
VGL	CM	K505/D3	C30L
VGL	CM	K507/D7	C30L
VGL	CM	N110/D4	C30L
VGN0-11	CM	N108/C8	C44L
VGR	DTM	K110/A9	36
VGT0-11	DTM	K110/A9-E9	35
VGT0-11	CM	K505/C1,D1	C43L
VGT0-11	CM	K507/B7,C7	C43L
VGT0-11	MTFC	N110/C1,D1	
VGT0-11	CM	N110/C3,D3	C43L
VGT1	MTC	N109/E3	R6
VG0,1,2,4,7,10	CM	K111/B7	C44L
VG0,1,2,4,7,10	OS	K111/B9	
VG0,1,2,4,7,10	OS	L120/A8,D8	
VG0,1,2,4,7,10	CM	L120/E5	C44L
VG0,1,2,4,7,10	AMRST	L120/H4	WL44
VG0,1,2,4,7,10	AMRST	L310/E0	WL44
VG0,1,2,4,7,10	CM	L310/E4	C44L
VG0,1,2,4,7	AMRST	P308/D1	WL44
VG0,1,2,4,7,10	CM	P308/E5	C44L
VG10	OS	K109/B8	
VTK	DTM	K107/E6	
VTK1	DTM	K110/G6	36
VTK1	CM	K505/G6	C43L
VTK1	CM	K507/E7	C43L
VTK1	CM	N110/G6	C43L
W	MTC	K411/F8	R43
W	AMRST	L115/A1	WR29
WL	AMRST	L115/F4	WR29
WOK	AMRST	L115/C1	WR29
WS	AMRST	L115/E4	WR29
WSD	MTC	J123/C1	RR24
WS1	AMRST	L115/B1	WR21
WT	CM	K129/B2	C16R
WT	DTM	K129/B2	12
X	AMRST	P210/C9	Y-38
XACH	DTM	K618/H8	9
XACH	CM	K619/H5	C6L
XACS	CM	K518/F3	C6L
XACS	CM	N111/F3	C6L
XAF	CM	K609/F5	C6L
XAF	DTM	K609/F5	9
XAFT	CM	K305/D1	C9L
XALR	CM	K609/E5	C6L
XALR	DTM	K609/E5	9
XAVGB	CM	K515/D7	C6L
XAVGB	DTM	K516/H5	9
XAVGB	DTM	K517/E4	9
XAVGB	CM	K518/F3	C6L
XAVGB	CM	N111/F3	C6L
XAVGB	CM	N112/H4	C6L
XBT	DTM	K107/A6,B7	10
XBT	DTM	K712/B7	10
XBT	CM	K713/B6	C7L
XCH	DTM	K618/H8	8
XCH	CM	K619/H6	C5L
XCL	AMRST	L325/E2	WR33
XCLC	CM	K116/E8	C7L
XCLC	CM	K118/A6	C7L
XCS	DTM	K517/F6	8
XCS	CM	K518/D3	C5L
XCS	CM	N111/D3	C5L
XF	DTM	K609/G7	8
XF	CM	K609/G7	C5L
XFT	CM	K305/C0	C9L
XFT	MTC	K305/F0	R36
XFTN	CM	N108/B0	C4L
XFUN	CM	N108/C0	C4L
XHG	DTM	K513/B4	10
XHG	CM	K515/E6	C7L
XICL	AMRST	L325/F0	WR33
XIR	AMRST	L111/E3	WR18
XIR	AMRST	L319/D2	WR18
XIR	AMRST	P114/E4	WR18
XLC	CM	K317/A4	C5L
XLG	DTM	K513/D4	10

• FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A707.

APPARATUS INDEX

DWG SIZE C2

ISSUE 5

BELL LABORATORIES

SFD-10-01

A707

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RELAYS

DESIG	CKT	LOC	EQPT LOC *
XLG	CM	K515/B7	C7L
XLH	DTM	K616/E1	25
XLR	DTM	K609/A4	8
XLR	CM	K609/A4	C5L
XLT	AMRST	L312/A1	WR33
XLT	AMRST	L325/E4	WR33
XLO	CM	K520/C1	C7L
XM	AMRST	L319/E2	9
XM	AMRST	P114/F4	9
XMRL	CM	K713/D5	C7L
XMR1	AMRST	L319/F2	WR18
XMR2	AMRST	K713/H4	WR18
XMR2	AMRST	L319/B2	WR18
XN	CM	K405/G9	C7L
XNS	CM	K405/F9	T34R
XOB	CM	K624/G6	T47R
XOR	AMRST	L111/F3	WR18
XOR	AMRST	L319/C2	WR18
XOR	AMRST	P114/D4	WR18
XOS	AMRST	L117/A1	WR18
XOS	AMRST	L319/C2	WR18
XOS	AMRST	P114/C2	WR18
XOS	AMRST	P114/E4	WR18
XPT	CM	K316/B6	C8L
XR	PRT	K807/A3	
XRC	CM	K409/G6	C8L
XRC	CM	N113/G7	C8L
XRL	CM	K713/F6	C8L
XRL	PRT	K810/B6	
XRS3,4	CM	K622/A5,B5	C6L
XS	CM	K206/C2	C8L
XSA	CM	K206/C2	C22L
XSL	DTM	K616/D8	9
XSL	CM	K617/C8	C8L
XSS	CM	K205/D0	C8L
XT	CM	K116/D8	C8L
XT	CM	K118/D6	C8L
XT	PRT	K807/G1	
XTA	CM	K118/C6	C9L
XTC1	DTM	K105/F4	10
XTG1	DTM	K312/D5	7
XTG1	CM	K313/C4	C8L
XTRK	DTM	K107/F6	10
XTRK	CM	K117/E4	C8L
XTRK	DTM	K712/D6	10
XTRL	DTM	K107/B7	10
XTRL	DTM	K712/A7	10
XTRL	CM	K713/B5	C8L
XTS	CM	K317/G4	C5L
XTS1	CM	K317/G4	C8L
XVGA	DTM	K110/H6	10
XVGB	DTM	K513/F4	8
XVGB	DTM	K516/G5	8
XVGB	DTM	K517/E5	8
XVGB	CM	K518/G4	C5L
XVGB	CM	K519/G4	C5L
XVGB	CM	N111/G3	C5L
XVGB	CM	N112/H4	C5L
Y0	AMRST	P215/A1	RR6
Y3	AMRST	P215/B1	RR6
Y6	AMRST	P215/C1	RR6
Y9	AMRST	P215/C1	RR6
Z	MTC	K411/E7	R44
Z1-4	AMRST	P215/G1-H1	RR6
0	AMRST	L218/B5	WL20
0	SR	L232/E8	
0	SR	P209/E8	
0*	AMRST	L218/B4	WL21
1	AMRST	L218/G5	WL20
1	SR	L232/E8	
1	SR	P209/E8	
1*	AMRST	L218/G4	WL21
1F	CM	K607/A7	C38R
1F	AMRST	L220/F2	WL28
1FA	CM	K607/B7	C38R
1SE	CM	K316/C6	C26L
10	SR	L232/A8	
10	AMRST	L236/G3	Y-24
10	SR	P209/A8	
10	AMRST	P216/E1	Y-24
10LV	CM	K609/E3	C10L
10LV	DTM	K609/E3	22
11	AMRST	P210/D9	Y-37
11*	AMRST	P210/D9	Y-37
11R	AMRST	P212/G3	Y-37
11X	PRT	K804/D8	
12	AMRST	P210/D9	Y-37
12*	AMRST	P210/E9	Y-37
12LV	CM	K609/E3	C10L
12LV	DTM	K609/E3	22
2	AMRST	L218/G4	WL20
2	SR	L232/D8	
2	SR	P209/D8	
2*	AMRST	L218/G4	WL21
2F	CM	K607/B7	C38R
2F	AMRST	L220/E2	WL28
2FA	CM	K607/C7	C38R
2P	AMRST	L209/C5	WR15
2SA	CM	K316/C6	
3	AMRST	L218/F4	C26L
3*	AMRST	L218/F4	WL21
3F	AMRST	L220/E2	WL28
3KPF	AMRST	L220/C5	WL29
3NA	CM	K316/C6	C26L
4	AMRST	L218/F4	WL20
4	SR	L232/C8	
4	SR	P209/C8	
4*	AMRST	L218/F4	WL21
4F	AMRST	L220/D2	WL28
4NE	CM	K316/D6	C26L
5	AMRST	L218/E4	WL20
5*	AMRST	L218/E4	WL21
5F	AMRST	L220/D2	WL28
5ST	CM	K316/D6	C26L
6	AMRST	L218/D4	WL20
6*	AMRST	L218/D4	WL21
6F	AMRST	L220/C2	WL28
6NT	CM	K316/E6	C26L
7	AMRST	L218/D4	WL20
7	SR	L232/B8	
7	SR	P209/B8	
7*	AMRST	L218/D4	WL21
7F	AMRST	L220/C2	WL28
7RN	CM	K316/E6	C26L
8	AMRST	L218/C4	WL20
8*	AMRST	L218/C4	WL21
8F	AMRST	L220/B2	WL28
8SP	CM	K316/E6	C26L
9	AMRST	L218/C4	WL20
9*	AMRST	L218/C4	WL21
9F	AMRST	L220/B2	WL28
9NP	CM	K316/F6	C26L

JACKS

DESIG	CKT	LOC	EQPT LOC *
A	MISC	N010/B0,C0	
B	MISC	N010/C0,D0	
CK3	SR	L232/G3	
CK3	SR	P209/G3	
CTG	AMRST	L216/C0	
IN	SR	P208/A3,B3	
ITT	MISC	M408/E1	
ITT	MISC	M708/E1	
JS0	LL	K618/E0	
JS0	TL	K618/E4	
JS0	LL	K619/E0	
JS0	TL	K619/E4	
JS0-9	TL	K616/B6	
JS5	LL	K618/E0	
JS5	TL	K618/E5	
JS5	LL	K619/E0	
JS5	TL	K619/E5	
JS9	LL	K618/E1	
JS9	TL	K618/E5	
JS9	LL	K619/E1	
JS9	TL	K619/E5	
KP	SR	P209/G5	
L	AMRST	L233/E7,E9,F6	
L	AMRST	P213/E7,D9	
MB	JLK	K206/F3	
MB	JLK	K313/C9	
MBE	ALL	K514/D9	
MBO	ALL	K514/B9	
MEAS 600	T-TERM	M212/E8	
MEAS 900	T-TERM	M212/F8	
MF2	AMRST	L229/C4	
MF2-4	AMRST	L223/B3	
MF3	AMRST	L229/D4	
MF4	AMRST	L212/A0	
MF4	AMRST	L213/A0	
MF4	AMRST	L214/A0	
MMB	JLK	J117/D0	
MMB	JLK	K115/C4	
NMB	NG	K406/G1	
NVA	AMRST	L230/G4,H4	
NVA	AMRST	P206/E4	
ORMB	JLK	K312/C9	
OUT	M-AMPL	M212/A1	
PG	AMRST	L226/B3	
PG1	AMRST	L221/D7	
PLS	AMRST	L225/B9,C9	
PRT-MB	JLK	K808/G2	
RA	AMRST	L233/H1	
RA	AMRST	P213/G1	
RC	MISC	J103/D2	
RCVR	T-TERM	M212/A3	
REC1	T-TERM	M212/B7	
REC1	T-TERM	M212/C3	
REC2	T-TERM	M212/E3	
SCMB	JLK	K203/B9,C9	
SD	T-TERM	M212/B3	
SD	T-TERM	M212/B7	
SP	SR	L232/G1	
SP	SR	P209/G1	
T	IT	M209/B1	
T	IT	M211/B1,F1	
T	IT	M309/B1	
T	IT	M408/B2	
T	ITT	M708/B1	
TK	AMRST	L239/B0	
TM1,2	JLK	M210/C1,D1	
TRK1,2	T-TERM	M212/A7,E7	
TRMB	TRC	K707/D4	
TRMB	JLK	L125/A5	
TRMB	AMRST	P307/E3	
TRMB-CM	JLK	K707/D7	
TRMB-DTM	JLK	K708/E9	
TRMB-PRT	JLK	K808/B0	
TST	TT	M109/C7-F6	
TST	TT	M409/C5-E5	
TST	TT	M509/C8	
TST	TT	M509/C7	
TST	TT	M509/D8	
TST	TT	M509/E7	
TST1	T-TERM	M212/B6	
TST2	T-TERM	M212/E5	
TTS	AMRST	L230/B5	
TTS	AMRST	P207/A3	
T1	VM TST	N008/D8	
T2	VM TST	N008/F8	
VL	AMRST	L226/B3,C2,D1	
1N	M-AMPL	M212/E1	
1000/0/900	T-TERM	M212/F6	
1000/0/600	T-TERM	M212/G6	

KEYS

DESIG	CKT	LOC	EQPT LOC *
(FG2)	MTC	K307/H6	
+-	VM TST	N009/A0-G5	
+STA	VM TST	N009/H2,H6	
-STA	VM TST	N009/G3-H6	
A(0-9)	MTC	L116/D6	
A(0-9)	MTC	L122/A0	
ABN	AMRST	L240/E1	
ACDR	TT	M009/E4	
ACDR	TT	M109/F3	
ACDR	TT	M208/E6	
ACDR	TT	M308/G2	
ACDR	TT	M408/G7	
ACDR	TT	M509/E2	
ACDR	TT	M609/E7	
ACO	AMRST	L319/E2	
ACO	AMRST	P114/E5	
ADJ	AMRST	L221/B3,F6	
ADJ	AMRST	L227/B4	
AM	VM TST	N009/G2-H7	
ANS	TT	M009/D6	
ANS	TT	M109/E5	
ANS	TT	M409/D2	
ANS	TT	M509/G5	
ANS	TT	M609/D2	
ANS	TT	M709/F2	
AP1	MTC	L214/H4	
AP1	MTC	L216/C3	
AR	MISC	K115/C8	
AR	PCMB	K306/F9	
AR	PCMB	K307/D9	
AR	PCMB	K407/A7,E7	
AR	LL	K511/A8	
AR	LL	K511/E8	
A0-9	MTC	K119/A8	
A0-9	MTC	K120/A1-C2	
A0-9	MTC	K804/A0	
A0-9	MTC	L210/A7	
A0-9	MTC	L217/D0	
B(0-9)	MTC	L116/C4	
B(0-9)	MTC	L122/C0	
BAT	JLK	K115/E9	
BB	MTC	K119/E3	
BL	AMRST	L108/C6	
BLA	TT	M408/D4,F4	
BLA	TT	M708/D3	
BLA	TT	M708/F3	
BLR	AMRST	L315/F2	
BP1	MTC	L214/H5	
BP1	MTC	L216/C5	
BV	TT	M308/G1	
B0-9	MTC	K119/B8	
B0-9	MTC	K120/F3	
B0-9	MTC	K804/E4	
B0-9	MTC	L210/B7	
B0-9	MTC	L217/D1	
C(0-9)	MTC	L116/D4	
C(0-9)	MTC	L122/C0	
CAM1	MTC	M009/G3	
CAM1	MTC	M609/F8	
CCT	JLK	K612/D1	
CCT	JLK	K620/G6	
CCT	JLK	K621/G8	
CGB	MTC	K125/C4	
CGB	MTC	K516/E1,F1	
CGT	JLK	K612/E1	
CHT	MTC	J124/B6	
CHT	MTC	K312/A4	
CHT	MTC	K313/A4	
CHT	MTC	K510/B9,F9	
CH0-9	MTC	K608/B1,D0	
CN	AMRST	L219/D8	
CN	AMRST	L322/D8	
CN	AMRST	L325/B3	
CNR	MTC	K124/C1	
CNR	MTC	L121/E1	
COMP	TT	M408/C3,F3	
COMP	TT	M708/D2	

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

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KEYS

DESIG	CKT	LOC	EQPT LOC *
COMP	TT	M708/F3	
CON	MTC	K620/E1,F1	
CON	MTC	K621/C1,D1	
CRU0-9	MTC	N111/E1	
CRU0-9	MTC	N112/F1	
CSGA	MTC	K517/G1	
CSGB	MTC	K517/G1	
CST0-2	MTC	K112/D2-F2	
CST0-9	MTC	K112/E2	
CST0-9	MTC	K125/B2-E3	
CST0-9	MTC	K517/C1	
CST0-9	MTC	N107/C6	
CST0-9	MTC	N111/B1	
CST0-9	MTC	N112/C1	
CST0,1	MTC	N107/A6,C6	
CSU0-9	MTC	K112/D2	
CSU0-9	MTC	K125/F2-H3	
CSU0-9	MTC	K517/D1	
CSU0-9	MTC	N107/B6	
CSU0-9	MTC	N111/D1	
CSU0-9	MTC	N112/D1	
C0-9	MTC	K119/C8	
C0-9	MTC	K121/A2	
C0-9	MTC	K804/F4	
C0-9	MTC	L210/C7	
C0-9	MTC	L217/D2	
D(0-9)	MTC	L116/D4	
D(0-9)	MTC	L122/D0	
DC	AMRST	L108/E6	
DC	AMRST	L113/B6	
DC	AMRST	L209/C2	
DC	AMRST	L315/F3,G2	
DCK	MTC	K118/E3	
DISC	AMRST	L240/D1	
DSS	AMRST	L219/F7	
DSS	AMRST	L220/C5	
DT	MTC	J105/B1,F1	
DT	MTC	L107/B0	
DTR	AMRST	L238/C3	
DTR	AMRST	L240/A1	
D0-9	MTC	K119/C8	
D0-9	MTC	K121/D2	
D0-9	MTC	K411/F4	
D0-9	MTC	L210/C7	
D0-9	MTC	L217/D2	
E	MTC	K316/F3	
E(0-9)	MTC	L116/E4	
E(0-9)	MTC	L122/E0	
E-M	TT	M009/A1,C1	
E-M	TT	M609/B1	
E-M	TT	M609/C1	
E-M	TT	M709/A1	
E-M	TT	M709/B1	
EBH	MTC	K105/D5	
EBH	MTC	K411/E7-F8	
ETMC	MTC	K316/E2	
EXR	JLK	K128/G7	
E0-9	MTC	K119/D8	
E0-9	MTC	K122/A2	
E0-9	MTC	L210/D7	
E0-9	MTC	L217/D3	
F(0-9)	MTC	L116/F4	
F(0-9)	MTC	L123/B0	
FACD	MTC	K118/A1	
FACD	MTC	L121/A2	
FCG	MTC	K617/G6	
FCG	MTC	K620/E3	
FCG	MTC	K621/D3	
FEMF	VM TST	N009/H1,H7	
FG0	MTC	K304/G2	
FG0	MTC	K305/F1	
FG1	MTC	K127/A1	
FG1	MTC	K304/G5	
FG1	MTC	K305/G4	
FG1	MTC	K307/G6	
FG1,2	MTC	J119/G0	
FG2	MTC	K127/A2	

DESIG	CKT	LOC	EQPT LOC *
FKP	AMRST	L220/F4	
FNA	MTC	N107/C4	
FNB	MTC	N107/D4	
FS	MTC	J107/E1	
FS	MTC	K104/D5	
FS	MTC	K105/E5	
FS0-9	MTC	K304/F2,F5,G2	
FS0-9	MTC	K305/F1,F4	
FS0-9	MTC	K307/F8,G8	
FS0,4,5,6	MTC	K127/E1	
FS0,7,8,9	MTC	K127/E1	
FS1,2,4,7	MTC	K127/B1	
FS1,3,5,8	MTC	K127/C1	
FS2,3,6,9	MTC	K127/D1	
FT0-5	MTC	K108/B0-D1	
FT0-5	MTC	K109/A0-C1	
FT0-5	MTC	K506/C1	
FT0-5	MTC	K514/G8	
FT0-5	MTC	N109/A5	
FU0-9	MTC	K108/E0-H1	
FU0-9	MTC	K109/E0-G1	
FU0-9	MTC	K506/E1	
FU0-9	MTC	K514/G4	
FU0-9	MTC	N109/B5	
F0-9	MTC	K119/D8	
F0-9	MTC	K122/D2	
F0-9	MTC	L210/D7	
F0-9	MTC	L217/D4	
G	VM TST	N009/E2	
G(0-9)	MTC	L116/F4	
G(0-9)	MTC	L123/B0	
GS	TT	M408/D4	
GS	TT	M708/D3	
GT	MTC	K621/C2	
G0-9	MTC	K119/E8	
G0-9	MTC	K122/G2	
G0-9	MTC	L210/E7	
G0-9	MTC	L217/D4	
H(0-9)	MTC	L116/G4	
H(0-9)	MTC	L123/C0	
HFA	AMRST	L221/B3	
HFA	AMRST	L227/C4	
HG0-9	MTC	K112/A1	
HG0-9	MTC	K113/A0-D1	
HG0-9	MTC	K508/A1	
HG0-9	MTC	N109/F5	
HLD	AMRST	P108/B3	
HLV	AMRST	L226/F4	
HS	TT	M408/G2	
HS	TT	M708/G2	
HTR	MTC	K129/E0,G0	
H0-9	MTC	K119/F8	
H0-9	MTC	K123/A1	
H0-9	MTC	L210/F7	
H0-9	MTC	L217/D5	
IAO	MTC	J105/C6	
IC-AB	MTC	K116/B2,F0	
IC-AB	MTC	L113/F8	
IC-AB	MTC	L315/B4	
IC-FVD	MTC	K116/E0	
IC-NTAN	MTC	K116/E0,F1	
IC-OA	MTC	K116/A1,G0	
IC-OA	MTC	K316/F1	
IC-OA	MTC	L113/D8	
IC-OA	MTC	L315/A4	
IC-OAT	MTC	K116/B1	
IC-OAT	MTC	K316/F1	
IC-OB	MTC	K116/C1,G0	
IC-OB	MTC	K316/F1	
IC-OB	MTC	L113/E8	
IC-OB	MTC	L315/B4	
IC-OBT	MTC	K116/C1	
IC-OBT	MTC	K316/G1	
IG-	AMRST	P112/G8	
IG0	AMRST	L107/B8	
IG0	AMRST	L110/B4	
IG0	AMRST	P112/G8	

DESIG	CKT	LOC	EQPT LOC *
IG1-14	AMRST	L107/C8,D8	
IG1-14	AMRST	L110/C4,D4	
IG14	AMRST	P112/H7	
IMG-SX	TT	M009/A2-C5	
IMG-SX	TT	M609/B2	
IMG-SX	TT	M609/B5	
IMG-SX	TT	M609/C2	
IMG-SX	TT	M609/C5	
IMG-SX	TT	M709/A2	
IMG-SX	TT	M709/A4	
IMG-SX	TT	M709/B2	
IMG-SX	TT	M709/B4	
IMGA	TT	M109/A3,C3,D4	
IMGA	TT	M210/E2,F2,G2	
IMGA	TT	M409/A1,B1,C1	
IMGA	TT	M509/A5	
IMGA	TT	M509/C5	
IMGB	TT	M109/A3,C3,D3	
IMGB	TT	M210/E3,F3,G3	
IMGB	TT	M409/A0,B0,C0	
IMGB	TT	M509/A4-C4	
IMGB	TT	M509/C5	
IMS	MTC	J105/E1	
IMS	MTC	L107/C1	
INC	MTC	J105/C1,F2	
INC	MTC	L107/B1	
IR	MTC	J105/E1	
IR	MTC	L107/C1	
IRGT	AMRST	L107/B9	
IRGT	AMRST	L110/A5	
IRV	TT	M408/D2,F2	
IRV	TT	M708/D2	
IRV	TT	M708/F2	
ITC-RN0-9	MTC	K316/D1	
ITDO	MTC	J105/D6	
ITNP	MTC	J105/D6	
J(0-9)	MTC	L116/G4	
J(0-9)	MTC	L123/C0	
JSQ0-5	MTC	K104/B3-B5,G3	
JSQ0-5	MTC	K105/B3-B5,G3	
J0-9	MTC	K119/F8	
J0-9	MTC	K123/C1	
J0-9	MTC	L210/F7	
J0-9	MTC	L217/D6	
K(0-9)	MTC	L116/H4	
K(0-9)	MTC	L123/D0	
KRC	MTC	K118/G1	
KRC	MTC	K119/F3	
KRC	MTC	N113/E1	
KY	MTC	K119/F3	
K0-9	MTC	K119/G8	
K0-9	MTC	K123/C1	
K0-9	MTC	L210/G7	
K0-9	MTC	L217/D6	
L(0-9)	MTC	L116/H4	
L(0-9)	MTC	L123/D0	
LB	MTC	K411/E0	
LB	MTC	K513/B1	
LB	MTC	K614/C4	
LBL	MTC	K513/C1	
LBL	MTC	K614/C3,E1	
LFA	AMRST	L221/B3	
LFA	AMRST	L227/B4	
LGP	AMRST	L221/A8,C7	
LGT	MTC	K621/D2	
LK	MTC	K807/D7	
LL	AMRST	L220/E4	
LLP	TT	M408/E4,F4	
LLP	TT	M708/E4	
LLP	TT	M708/F4	
LLV	AMRST	L226/G4	
LP	T-TERM	M212/A8	
LPT	MTC	J124/F0	
LP0-11	MTC	J124/A1-C1	
LR	MTC	K118/D3	
LS	TT	M408/F2	
LS	TT	M708/F2	

DESIG	CKT	LOC	EQPT LOC *
LT	MTC	J103/C3	
LT	MTC	J105/F6	
LT1	MTC	K118/C1	
LT1	MTC	K804/D6	
LT1	MTC	L121/C2	
LT1-3	MTC	K116/E3	
L0-9	MTC	K119/G8	
L0-9	MTC	K123/D1	
L0-9	MTC	L210/H7	
L0-9	MTC	L217/D7	
MAC	AMRST	L108/F7	
MAC	AMRST	L230/G6,H5	
MAC	AMRST	P206/B8	
MCC	TRC	K707/D1	
MCOR	TRC	J121/E9	
MCOR	TRC	K707/E1	
MF	MTC	K106/D0	
MF	MTC	K119/A3	
MFEB	MTC	K514/G0	
MFSB	MTC	K514/G0,F3	
MIR	AMRST	P109/D7	
MIR	AMRST	P114/B6	
MISC	MTC	J105/B6	
MLF	MTC	K106/C0	
MLF	MTC	K119/A3	
MLV	MTC	J105/E6	
MOTL	AMRST	L224/B6	
MPIR	AMRST	P109/D7	
MPIR	AMRST	P112/B8,A9	
MPIR	AMRST	P114/B5	
MPOR	AMRST	P114/B0	
MPOR	AMRST	P114/C4,C8	
MPOS	AMRST	P112/B9	
MPOS	AMRST	P114/B3,C8	
MT-	MTC	J108/G4-G7	
MT-	MTC	J111/G5,G6	
MT-	MTC	J112/G4-G7	
MT-	MTC	J115/G6,G8	
MTO	MTC	J111/G4	
MTO	MTC	J115/G5	
MTO-Z	MTC	J109/G2-G4	
MTO-Z	MTC	J113/G2-G4	
MOR	AMRST	P109/B5,B7	
MOS	AMRST	P109/A5,B7	
ND	MTC	K208/C0	
NFGO	MTC	K127/A0	
NFGZ	MTC	K127/A0	
NG(A-H)	MTC	K414/C3	
NGT	MTC	K414/B3	
NH	MTC	K412/F4	
NN	MTC	K412/F4	
NT	MTC	K412/E4	
NTC	MTC	K614/E4	
NTFS	MTC	J107/G1	
NTFS	MTC	K104/E5	
NTFS	MTC	K105/E5	
NTL	MTC	K409/G4	
NTTS	MTC	J107/E1	
NTTS	MTC	K104/A2	
NTTS	MTC	K105/A2,H4	
NTTS	MTC	K312/A4	
NTTS	MTC	K713/A3,B4	
NTTS	MTC	N008/E3	
NOTT	MTC	K208/D0	
OBS	MTC	K624/B4,G4	
OCN	MTC	K118/G3	
OGT	MTC	J105/B6	
O[illegible]	MTC	J105/D1	
OR	MTC	L107/B1,D1	
ORH	AMRST	L320/A5	
ORIG	MTC	J105/B1,F1	
ORIG	MTC	L107/B1	
OSS	MTC	J123/B4	
OSS	MTC	K105/D5	
OS0-4	MTC	K205/B4	
OT	MTC	K810/C0	
OTR	AMRST	L238/C2	

DESIG	CKT	LOC	EQPT LOC *
OTR	AMRST	L240/A0	
OTRC	MTC	K409/D1	
P&LO	MTC	K110/C0	
P&LO	MTC	K112/B1	
P&LO	MTC	K113/E2	
P&LO	MTC	K507/C1	
P&LO	MTC	K508/B1	
P&LO	MTC	K508/F1	
PB	AMRST	L107/C3	
PBXH	MTC	K105/D5	
PBXH	MTC	K411/E9,F7,F8	
PD	MTC	K124/A2	
PD	MTC	L121/D2	
PHC	MTC	K116/C4	
PMM	MTC	K125/G5	
PMM	MTC	L121/D1	
PR	AMRST	L220/F6	
PRL	MTC	K810/A3,B0	
PS	MTC	K124/A1	
PS	MTC	L121/D1	
PTL	MTC	K412/D1	
PTP	TT	M109/A4,C4	
PTP	TT	M409/A2,B2	
PTP	TT	M509/A6	
PTP	TT	M509/C6	
PTR	MTC	K810/C0-E3	
PTT	MTC	J105/F5	
PU	MTC	K614/E1	
PU	MTC	K621/C2,D2	
P1	AMRST	L212/D7,F8	
P11	AMRST	L211/C2	
P11	AMRST	L212/D6,F7	
QTR	AMRST	L323/C1	
QTR	AMRST	L325/D1	
RAB	AMRST	L208/D7	
RAB	AMRST	L219/C7,D8	
RA0-3	MTC	K107/D1,E1	
RA0-3	MTC	K606/D5,D6	
RBT	AMRST	L209/B1	
RBT	AMRST	L322/D7	
RBT	AMRST	L325/B2	
RCT1	MTC	K409/F1	
RCT1	MTC	N113/B1	
RC1-15	MTC	K409/B2-E2	
RC1-15	MTC	N113/D1,E1	
RC1-5	MTC	K409/D2	
RC10	MTC	N107/E6	
REC	MTC	K708/F4	
REC	MTC	K711/G6,F8	
REC2	T-TERM	M212/D4,E4	
RED	TS	J103/D1	
REP	MTC	J107/A2	
REP	MTC	L325/B8,D8	
RG	VM TST	N009/D1,E7	
RL	STS	J103/E0	
RL	MTC	J109/G6	
RL	MTC	J113/G6	
RLK	MTC	K810/A3,B2	
RLR	AMRST	L108/D6	
RLR	AMRST	L209/C2	
RLR	AMRST	L315/F3,G2	
RLT	MTC	K713/F3	
ROHT	VM TST	N009/A0-G5	
ROT	MTC	K624/D3,E3	
ROT	MTC	N109/G6	
RPD	AMRST	L219/D7,D8	
RPF	AMRST	L224/E5,G5	
RPS	AMRST	L208/E7	
RPS	AMRST	L209/A1	
RRP	AMRST	L224/E5,F5	
RRO	AMRST	L315/F4,F6	
RRO	AMRST	L326/D1	
RTP	AMRST	L224/G5	
RV	MTC	K620/G2	
RV	MTC	K621/E1	
RVP	TT	M408/F3	
RVP	TT	M708/F3	

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

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KEYS												LAMPS							
DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *
R0	MTC	K116/G3		TG	MTC	M308/G4		VGT1	MTC	K111/A2,C2		AAB	AMRST	L230/H5		IAO	MTC	J106/B5	
R0	MTC	K118/B2		TG	MTC	M408/G9		VGT1	MTC	K507/B0		AAB	AMRST	L233/F5		IMS	MTC	J106/C3	
ROT	MTC	K708/F1		TG	MTC	M609/F9		VGT1	MTC	N109/D5,E4		AAB	AMRST	P206/C8		INC	MTC	J106/B1	
ROT	MTC	K711/G8		TG	MTC	M709/F4		VGO-10	MTC	K507/A2		AAB	AMRST	P213/D5,D4		INC	AMRST	L312/E0	
RING	TKL	N010/D8,E8		THC	MTC	K116/B4		VGO-11	MTC	K110/A2,B2		ACV	JLK	K621/G8		IR	MTC	J106/B3	
SCN	MTC	K124/C2		THO	MTC	K316/F2		VGO-11	MTC	K111/A0-E2		AD	AMRST	L215/E2		IR	AMRST	P108/D0	
SCN	MTC	L121/E2		TLK	TT	M008/A0,B0		VGO-11	MTC	N109/D5		AD1	AMRST	L215/E2		ITDO	MTC	J106/C5	
SCO	TKL	N010/C4-E4,D5		TLK	TT	M108/A0,B0		VM REV	VM TST	N009/G3,G6,G7		AD3	AMRST	L215/E3		ITNP	MTC	J106/D5	
SD-REC1	T-TERM	M212/B8		TLK	TT	M208/A0,B0		VM T1	VM TST	N009/E1-G6		AD4	AMRST	L215/E3		KP	AMRST	L215/E0	
SDR	MTC	J105/D1		TLK	TT	M210/A0-F0		VM T2	VM TST	N009/F2-G6		AS	TT	K614/B0		KP1	AMRST	L215/E1	
SDR	MTC	L107/B1		TLK	TT	M308/A0,C0		WHITE	TS	J103/D2		AS	TT	M008/D1		LBS0,1	CM	K510/B7,D7	
SDT	MTC	J105/C1,F2		TLK	TT	M409/F8,G8		XLH	MTC	K614/C1,C4		AS	TT	M108/D2		LBS0,1	DTM	K510/F7,H7	
SER	AMRST	L322/D3		TLK	TT	M508/A0		X11	MTC	K116/E2		AS	TT	M208/D1		LC	CM	K317/A3	
SF	AMRST	L220/B6,C4		TLK	TT	M508/C0		1000	VM TST	N009/G3,H0-H5		AS	TT	M210/D2		LF	MTC	K412/E0	
SG-	AMRST	P112/D8		TLK	TT	M608/B0		11	MTC	K116/E2		AS	TT	M308/D2		LFS	CM	K510/B2	
SGA	MTC	K203/D2		TLK	TT	M608/C0		11	MTC	K118/C1		AS	TT	M508/D2		LG	DTM	K513/D4	
SGA	MTC	K206/E1		TLK	TT	M608/E2		11	MTC	K804/D5		AS	TT	M608/D0		LG	CM	K515/B7	
SGB	MTC	K203/E2		TLK	TT	M709/C7		15MAX	AMRST	L222/C1-F5		BLT	AMRST	L115/C8		LHMT	MTC	K614/D5	
SGB	MTC	K206/E2		TLK	TT	M709/D7		15MAX	AMRST	L225/C0,C8		BN	MTC	K413/G3		LK	AMRST	L112/C8	
SGT	AMRST	L107/D9		TLK	TT	N010/G2		15MIN	AMRST	L222/C1-F5		BP	AMRST	L215/E1		LK	IR	L112/D0	
SGT	AMRST	P112/B9		TLV	MTC	J103/C6		15MIN	AMRST	L225/D0,C8		BT-OF	MTC	K107/A2		LK2	MTC	K708/G6	
SGO	AMRST	P112/D8		TMDW	VM TST	N008/B4,C4		2CD	MTC	K121/A0		BT-OF	MTC	K712/D1		LK2	MTC	K711/F0	
SGO-10	AMRST	L107/F9,G8		TMS1	T-TERM	M212/B8,D6		2CD	MTC	K804/G3		BT-OF	MTC	K713/D0		LLCO	JLK	K510/A9,D9	
SG10	AMRST	P112/E7		TMS2	T-TERM	M212/D4,E4,E5		2P	AMRST	L209/C5		BY	MTC	K411/E2		LLF	JLK	J124/B9	
SLP	TT	M408/D4		TMT	AMRST	L238/G1		20,000	VM TST	N009/H1,H2,H5		BY	MTC	K622/B0		LLJ	MTC	K616/H1	
SLP	TT	M408/F4		TM1,2	JLK	M210/D1		24MAX	AMRST	L222/B1-E5		BY1	VM TST	N008/D6		LLJ	MTC	K617/F3	
SLP	TT	M708/D4		TP	MTC	K125/F5		24MAX	AMRST	L225/A0,B9		BY2	VM TST	N008/F6		LR	DTM	K609/A5	
SLR	TT	M708/F4		TP	MTC	L121/D2		24MIN	AMRST	L222/C1-F2		CCK	AMRST	L323/D0		LR	CM	K609/A5	
SLO	AMRST	L220/C6		TPF	AMRST	L224/F5,G5		24MIN	AMRST	L225/B0,B8		CCK	AMRST	L325/F6		LT	MTC	J106/E5	
SP	MTC	K107/B3		TR	PCMB	K306/A8,C8,F8		3FD	AMRST	L315/G4		CCT	JLK	K612/D1		LO	AMRST	L112/C7	
SP	MTC	K712/A3		TR	PCMB	K307/A9,C9,E9		3FD	AMRST	L326/D2		CCT	JLK	K620/H6		LOB	CM	K520/C1	
SP	MTC	K713/B2		TR	PCMB	K407/A0-E8		3FKP	AMRST	L220/C4		CCT	JLK	K621/G8		L1	IT	M209/D2	
SPL	MTC	K116/A4		TR	LL	K511/A5		7MAX	AMRST	L222/D1-F5		CE	CM	K127/G5		M	MTC	K412/D0	
SPL	MTC	L113/D7,E7,F7		TR	LL	K511/A8		7MAX	AMRST	L225/D0,D8		CGT	JLK	K612/E1		M-	JLK	K115/F8	
SPL	MTC	L315/A5,B5,C2		TR	LL	K511/B1		7MIN	AMRST	L222/D1-G5		CH	PCMB	K306/B8		MA	CM	K206/D5	
SRS(0-9)	AMRST	L110/E7		TR	LL	K511/E1,E8		7MIN	AMRST	L225/D0,E8		CH	PCMB	K307/A9		MB	CM	K206/D4	
SRS(0-9)	AMRST	L112/B6,E6		TR	LL	K511/E5						CH	PCMB	K407/A0,D1		MC	CM	K206/D4	
SRS0-9	AMRST	P112/F1		TR	T-TERM	M212/C6,C8						CH	LL	K511/A1		MFG	JLK	K115/D8	
SRS0-9	AMRST	P113/B3-C3		TRP	TT	K109/A5,C5						CH	LL	K511/D1		MISC	MTC	J106/A5	
ST	MTC	J103/A1		TRP	TT	M409/A2,B2						CK	MTC	K624/C1		MLV	MTC	J106/C1	
ST	STS	J103/C0		TRP	TT	M509/A6						CKS	AMRST	L325/F4		MLVF	MTC	K414/F2	
ST	MTC	L219/G8		TRP	TT	M509/C6						CMA	MTC	K807/D8		MLVM	MTC	K414/D2	
STD	AMRST	L325/C2		TRR-AR	JLK	P316/B7						CMB	MTC	K807/E8		MPP	CM	K514/B4	
STM	AMRST	P108/A1		TRS	MTC	K107/D3						CMC	MTC	K807/E8		MPP	CM	K514/E4	
STM	AMRST	P114/E5		TRS	MTC	K117/G0,G1						CM3	MTC	K807/D8		MPT	MTC	K412/D0	
STP	AMRST	L108/G2		TRS	MTC	K712/C3						CNR	MTC	K124/E1		MRL	MTC	K708/F6	
STP	AMRST	L220/D4		TRS	MTC	K808/B0						CON	DTM	K620/D9		MRL	MTC	K712/D1	
STP1,2	MTC	K604/F1,G1		TR2	MTC	K107/D3,E3						CON	CM	K621/C8		MRL	MTC	K713/E0	
STP1,2	MTC	K608/B0		TR2	MTC	K117/E1,F1						CS	DTM	K516/C6		MST	AMRST	L325/F4	
STP2	MTC	K605/F1,G1		TR2	MTC	K712/C4,D4						CS	TT	M608/D0		MST1	AMRST	L325/G4	
STS	TRC	J122/D8		TR2	MTC	K808/A0						CO	AMRST	L112/C8		MTT	MTC	K208/G8	
STT	AMRST	L107/A3		TS	MTC	J107/E1						D	AMRST	L115/A5		NBS1-4	CM	K406/A3,B3	
STT	AMRST	L319/F3		TS	MTC	K104/A2						DIS1	MTC	K708/G6		NGB	CM	M108/E1	
SURGE	AMRST	L222/D1-G6		TS	MTC	K105/A2						DIS1	MTC	K711/E6		NGC	JLK	J124/A9	
SURGE	AMRST	L225/G1		TS	T-TERM	M212/B4,C6,D4						DL	JLK	K707/F7		NGC	JLK	K406/E0	
SXS	TT	M408/E4,F4		TST	AMRST	L315/F2						DL	JLK	K808/F1		NGKB	CM	K406/D6	
SXS	TT	M708/E4		TST1	MTC	K312/C0						DL	JLK	L125/B5		NGS	CM	K406/A4	
SXS	TT	M708/G4		TST1	MTC	K313/C0						DL	AMRST	P307/D3		NMB	NG	K406/H1	
S0-9	MTC	K411/G4		TSW	TT	M109/A5,C5						DT	MTC	J106/A1		NTB	MTC	K614/B2	
S0-9	MTC	K412/D3,D2-G2		TSW	TT	M409/A3,B3						F	CM	K609/G6		NTT	MTC	K412/F0	
T	OT&P	M209/B7,C7		TSW	TT	M509/A7						F	DTM	K609/G6		NVA	AMRST	L108/F6	
T	VM TST	N009/A1-G5		TSW	TT	M509/C7						FA	MISC	K115/A9		NVA	AMRST	L230/G5	
T	VM TST	N010/E5		TS0-19	MTC	K313/C0-G0						FA	MISC	P318/B[illegible]2		NVA	AMRST	P206/B9	
TA	AMRST	L125/D7		TS0-9	MTC	K312/C0,E0,F0						FD	AMRST	L325/G4		OFL	MTC	K622/B0	
TA	AMRST	L325/F0		TTC	MTC	K314/G0						FG	MISC	K115/B8		OGT	MTC	J106/A5	
TC	MTC	K620/C1		TTC	MTC	K623/F2						FPT	AMRST	L209/F5		OGT-CS	TT	M308/E1	
TC	MTC	K621/A1		TTL	MTC	K119/D3,E2						FTC	MTC	K304/H0		OGT-CS	TT	M409/E1	
TCB	MTC	J107/G6		TVT	MTC	J105/F6						FTC	MTC	K305/H1		OGT/CS	TT	M709/G0	
TCT	MTC	K128/D1		TWT	AMRST	L220/E4						GR	MTC	K810/D0		OH	AMRST	L112/C8	
TCT	MTC	K612/A1		TO	T-TERM	M212/B7,C6						G1	MTC	K810/D0		OK	AMRST	L325/H4	
TCT	MTC	K614/E1		T1 REV	VM TST	N008/A6,C6						HD	PRT	K810/C7		OR	MTC	J106/A3	
TCT	MTC	K620/D1,F1		T2 REV	VM TST	N009/F1-G5						HD	MTC	K810/E0		ORH	AMRST	L322/C1	
TCT	MTC	K621/B1,E1		VF0-4	MTC	K113/D3						HG	DTM	K513/C4		ORIG	MTC	J106/A1	
TG	MTC	J119/G3		VF0-4	MTC	K508/D1						HG	CM	K515/E7		ORON	AMRST	L325/F4	
TG	MTC	K208/A1		VF0-4	MTC	K512/A1						HGB	DTM	K112/F7		OS	AMRST	P112/D0	
TG	MTC	L325/A9		VF0-4	MTC	N109/F5						HGB	DTM	K513/B4		OSA	CM	K204/B0	
TG	MTC	M009/G2		VGT1	MTC	K110/B0						HGB	CM	K515/C7		OSA	AMRST	L215/E3	

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

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LAMPS

DESIG	CKT	LOC	EQPT LOC *
OSB	CM	K204/E0	
OSB	AMRST	L215/E4	
OSC	AMRST	L215/E4	
OSD	AMRST	L215/E5	
OSE	AMRST	L215/E5	
OSF	AMRST	L215/E6	
OSG	AMRST	L215/E6	
OSH	AMRST	L215/E7	
OSJ	AMRST	L215/E7	
OSK	AMRST	L215/E8	
OSL	AMRST	L215/E8	
OSM	AMRST	L215/E8	
PBX	MTC	K409/G3	
PK	TT	M208/D1	
PL	AMRST	L238/B7	
PRL	MTC	K810/D0	
PRT	JLK	K808/G3	
PTR	MTC	K810/E0	
PTT	MTC	J106/D1	
R	T	N010/H7	
R+	TT	M109/G8	
R+	TT	M409/E8	
R+	TT	M509/F4	
R-	TT	M109/F8	
R-	TT	M409/D8	
R-	TT	M509/G4	
RA1-11	MTC	K606/B1-G1	
RB	AMRST	L112/C7	
RBT1	MTC	K606/G8	
RB1,2	CM	K117/F5	
RCY	MTC	K606/A1	
RI	MTC	K413/E3	
RLK	AMRST	L115/B7	
RP	MTC	K622/A0	
RO	AMRST	L312/F0	
S	CM	K206/D2	
S	T-TERM	M212/A8	
S	VM TST	N008/G6	
SA	CM	K206/D2	
SAM	CM	K206/D3	
SB	MTC	K606/A7	
SBM	CM	K206/D3	
SCM	CM	K206/D3	
SD	MTC	K807/D8	
SDR	MTC	J106/A3	
SH	CM	K205/H3	
SKA	CM	K204/F3	
SKB	CM	K204/D3	
SLK	MTC	K411/E2	
SLV	TT	M408/G2	
SLV	TT	M708/G2	
SM	IR	L113/B1	
SMB	CM	K205/G1	
SP	MTC	K614/F5	
SPT	AMRST	L209/F5	
STP	MTC	K514/G1	
STT	MTC	J106/E3	
T+	TT	M109/D8	
T+	TT	M409/D8	
T+	TT	M509/F4	
T-	TT	M109/C8	
T-	TT	M409/C8	
T-	TT	M509/E4	
TA	MISC	K115/B9	
TAN	MTC	K116/H2	
TB	DTM	K312/G5	
TB	CM	K313/F5	
TB	MTC	K606/C7	
TBI	MTC	K413/H3	
TBL	AMRST	L326/B0	
TBS0-4	DTM	K306/C1-C3	
TBS0-4	CM	K307/B1-B3	
TBT0	MTC	K414/F5	
TBT1-8	MTC	K414/F7	
TBT9	MTC	K414/F9	
TBU	MTC	K414/G2	
TCA	AMRST	L312/F0	
TCB	AMRST	L312/F0	
TCT	MTC	K612/B1	
TC1	MTC	K106/G0	
TFS	DTM	K306/H6	
TFS	CM	K307/F0	
TK	AMRST	L238/B7	
TK1	AMRST	L238/B7	
TLC	JLK	K306/A0	
TLH	MTC	K616/G8	
TLH	MTC	K617/F8	
TMT	AMRST	L238/A7	
TN	OR	L224/A0	
TP	MTC	K622/B0	
TRC	TRC	J122/B7	
TRK	OT&P	M209/E7	
TRL	MTC	K107/C2	
TRL	MTC	K712/C1	
TRL	MTC	K713/D0	
TRT	MISC	K115/C9	
TS	TT	M109/D4	
TS	TT	M210/H2	
TS	TT	M409/C2	
TS	TT	M509/E4	
TSK	MTC	K312/A5	
TSK	MTC	K313/A5	
TSM	CM	K317/F2	
TT	MTC	K312/D0	
TT	MTC	K313/D0	
TVT	MTC	J106/E1	
TXP	DTM	K616/F7	
TXP	CM	K617/F8	
TXP1	DTM	K616/F7	
TXP1	CM	K617/F8	
TO	JLK	K206/H3	
VGA	DTM	K110/G9	
VGB	DTM	K513/F4	
VGB	DTM	K516/G4	
VGB	DTM	K517/E5	
VGB	CM	K518/G3	
VGB	CM	K519/G4	
VGB	CM	N111/G3	
VGB	CM	N112/H4	
VM	VM TST	N009/H0	
WF	CM	N108/D1	
WG	CM	N108/C1	
WL	AMRST	L115/A6	
WL	CM	N108/B1	
WS	AMRST	L115/A6	
X	AMRST	L319/D4	
X	AMRST	P114/F4	
XTSK	MTC	K312/A5	
XTSK	MTC	K313/A5	
OR	AMRST	P108/C0	
1	MTC	K622/D0	
1+	MTC	K622/E0	
2	MTC	K622/C0	
2+/FL1	MTC	K622/E0	
3/2+/3+	MTC	K622/C0	
4	MTC	K622/D0	
5	MTC	K622/D0	

SWITCHES

DESIG	CKT	LOC	EQPT LOC *
A	MTC	K120/A3,B3	
A	MTC	K804/A3,B3	
A	MTC	L116/A6	
A	MTC	L122/A0	
A	MTC	L210/A8	
A	MTC	L217/D0	
A-L	MTC	K119/A8-G8	
APU	MTC	L214/G4	
APU	MTC	L216/C4	
B	MTC	K120/F3	
B	MTC	K804/E4	
B	MTC	L116/C4	
B	MTC	L122/C0	
B	MTC	L210/A8	
B	MTC	L217/D1	
BPU	MTC	L214/G6	
BPU	MTC	L216/C5	
C	MTC	K121/A0,A2	
C	MTC	K804/F3,F4	
C	MTC	L116/D4	
C	MTC	L122/C0	
C	MTC	L210/B8	
C	MTC	L217/D2	
CH	MTC	K608/B1,D0	
CL	MTC	K116/G0,G3	
CL	MTC	K118/A3	
CL	MTC	L121/B2	
CL	MTC	L315/C3	
CL	MTC	L322/A4	
CPU	MTC	L214/G7	
CPU	MTC	L216/C7	
CRU	MTC	K517/E1	
CRU	MTC	N111/D1	
CRU	MTC	N112/E1	
CST	MTC	K112/E1	
CST	MTC	K125/A1,B1	
CST	MTC	K517/B1	
CST	MTC	N107/D6	
CST	MTC	N111/B1	
CST	MTC	N112/C1	
CSU	MTC	K112/D1	
CSU	MTC	K125/E1,F1	
CSU	MTC	K517/D1	
CSU	MTC	N107/B6	
CSU	MTC	N111/C1	
CSU	MTC	N112/D1	
D	MTC	K121/D2	
D	MTC	K411/F4	
D	MTC	L116/D4	
D	MTC	L122/D0	
D	MTC	L210/C8	
D	MTC	L217/D2	
E	MTC	K122/A2	
E	MTC	L116/E4	
E	MTC	L122/E0	
E	MTC	L210/C8	
E	MTC	L217/D3	
F	MTC	K122/D2	
F	MTC	L116/F4	
F	MTC	L123/B0	
F	MTC	L210/D8	
F	MTC	L217/D4	
FCA	AMRST	L221/B1,C1	
FCB	AMRST	L221/E5,F5	
FS	MTC	K127/B0,F0	
FS	MTC	K304/F1	
FS	MTC	K305/F0	
FS	MTC	K307/E9	
FT	MTC	K108/A3,B3	
FT	MTC	K109/A2,B2	
FT	MTC	K506/B1	
FT	MTC	K514/F8	
FT	MTC	N109/A5	
FU	MTC	K108/D3,E3	
FU	MTC	K109/D2,E2	
FU	MTC	K506/D1	
FU	MTC	K514/F4	
FU	MTC	N109/B5	
G	MTC	K122/G2	
G	MTC	L116/F4	
G	MTC	L123/B0	
G	MTC	L210/D8	
G	MTC	L217/D4	
H	MTC	K123/A1	
H	MTC	L116/G4	
H	MTC	L123/C0	
H	MTC	L210/E8	
H	MTC	L217/D5	
HG	MTC	K112/B1,C1	
HG	MTC	K113/A3,B3	
HG	MTC	K508/A1-B1	
HG	MTC	N109/E5	
IC	MTC	K116/B1,E1,F1	
IC	MTC	K316/G1	
IC	MTC	L113/E8	
IC	MTC	L315/A3	
ICL	MTC	K116/F3,G1	
ICL	MTC	L315/C1	
IRG	AMRST	P112/E7,F7	
IRG SEL	AMRST	L107/A8,B8	
IRG SEL	AMRST	L110/A4,B4	
ITC-RN	MTC	K316/D1	
J	MTC	K123/C1	
J	MTC	L116/G4	
J	MTC	L123/C0	
J	MTC	L210/F8	
J	MTC	L217/D6	
JSQ	MTC	K104/A4,G3	
JSQ	MTC	K105/A3,G3	
K	MTC	K123/C1	
K	MTC	L116/H4	
K	MTC	L123/D0	
K	MTC	L210/F8	
K	MTC	L217/D6	
L	MTC	K123/D1	
L	MTC	L116/H4	
L	MTC	L123/D0	
L	MTC	L210/L8	
L	MTC	L217/D8	
LP	MTC	J124/D1-G1	
M	MTC	L217/D9	
MB	IAO	K313/F9	
MT-	MTC	J111/G5,G6	
MT-	MTC	J115/G6,G8	
MTU-	MTC	J108/G4-G7	
MTU-	MTC	J112/G4-G7	
MTO	MTC	J111/G4	
MTO	MTC	J115/G5	
MTO-2	MTC	J109/G2-G4	
MTO-2	MTC	J113/G2-G4	
OS	MTC	K205/C3,C5	
PD	AMRST	L211/B1,E1	
RA	MTC	K107/E1,F1	
RA	MTC	K606/D8	
RAU	MTC	K107/F1	
RAU	MTC	K606/F8,F8	
RCU	MTC	K409/C2,E2	
RCU	MTC	N107/E6,E7	
RCU	MTC	N113/A1,B1	
RG	MTC	K106/A1	
RG	MTC	K119/B3	
S	MTC	K411/F4	
S	MTC	K412/D3,E3	
SG	AMRST	P112/B8	
SG SEL	AMRST	L107/E8	
SRS	AMRST	L110/D7	
SRS	AMRST	L112/A6,E6	
SRS	AMRST	P112/F1	
SRS	AMRST	P113/A2,A3	
TBS	MTC	K414/A3	
TBU	MTC	K414/G3	
TCL	MTC	L113/D8	
TRNA	MTC	K116/D1	
TRNA	MTC	K118/C3	
TRNA	MTC	K804/B6	
TRNA	MTC	L121/C2	
TRNA	MTC	L315/C4	
TRNA	MTC	L322/A3	
TRNB	MTC	K116/C1	
TRNB	MTC	K316/E1	
TRNB	MTC	K804/C6	
TRNC	MTC	L315/C5	
TSTA	MTC	J104/A1,G1	
TSTA	MTC	L107/A1,C1	
TSTB	MTC	J103/C3	
TSTB	MTC	J104/A5	
TSU	MTC	K312/C0-E0	
TSU	MTC	K313/B0-E0	
VF	MTC	K113/E3,F3,G3	
VF	MTC	K508/E1-G1	
VF	MTC	K512/B1	
VF	MTC	N109/G5	
VGU	MTC	K110/B1,D1,G1	
VGU	MTC	K111/A3,B3,C3	
VGU	MTC	K507/D1,G1	
VGU	MTC	N109/D5	

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

APPARATUS INDEX	DWG SIZE C2	ISSUE 5
BELL LABORATORIES	SFD-10-01	A711

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HOLD MAGNETS				SELECT MAGNETS															
DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *	DESIG	CKT	LOC	EQPT LOC *
ENTC	NTC	K615/F0-F5		ENTC	NTC	K615/E0,F0													
HOLD	RSW	M110/B6		NTC	NTC	K615/A0,B0													
HOLD-	RSW	M410/B6		S0-9	IRL	L111/A3,C4													
HOLD-	RSW	M510/B5		TA	TL	K317/F8													
H0-4	LL	M308/D4		TB	TL	K317/G8													
J-	TL	M708/B6		T0	TL	K317/F8													
J-	LL	M708/D5		T0-9	TL	K317/G7													
J0-9	LL	K616/A4		T1-9	TL	K317/G7,G8													
J0-9	TL	K616/A6																	
J0-9	LL	K617/A4																	
J0-9	TL	K617/A6																	
J0-9	LL	M008/D5																	
J0-9	LL	M108/D5																	
J0-9	TL	M108/D6																	
J0-9	TL	M109/C1																	
J0-9	LL	M109/D1																	
J0-9	LL	M208/D5																	
J0-9	TL	M208/D6																	
J0-9	LL	M210/D5,H5																	
J0-9	TL	M211/C5,G5																	
J0-9	LL	M211/D6,H6																	
J0-9	LL	M308/D5																	
J0-9	TL	M308/D5																	
J0-9	TL	M309/D5																	
J0-9	LL	M309/D6																	
J0-9	TL	M408/D6																	
J0-9	LL	M408/D7																	
J0-9	LL	M508/D5																	
J0-9	TL	M508/D6																	
J0-9	TL	M508/D6																	
J0-9	TL	M509/C1																	
J0-9	LL	M509/D2																	
J0-9	TL	M608/C6																	
J0-9	LL	M608/E6																	
J0-9	LL	N008/D1																	
J0-9	TL	N008/D2																	
L-	LL	M708/D5																	
L0	LL	K616/A2																	
L0	LL	K617/A2																	
L0-4	LL	K411/A0																	
L0-4	LL	M008/D5																	
L0-4	LL	M108/D5																	
L0-4	LL	M109/D2																	
L0-4	LL	M208/D4																	
L0-4	LL	M210/D4,H4																	
L0-4	LL	M211/D6,H6																	
L0-4	LL	M309/D6																	
L0-4	LL	M408/D7																	
L0-4	LL	M508/D5																	
L0-4	LL	M509/D2																	
L0-4	LL	M608/E6																	
L0-4	LL	N008/D1																	
L00	IRL	L111/B3																	
L4	LL	K616/A3																	
L4	LL	K617/A3																	
NT	LL	K615/B8-F9																	
NTC	NTC	K615/C1-C5																	
T-	TL	M708/C6																	
T0-9	TL	K616/A7																	
T0-9	TL	K617/A7																	
T0-9	TL	M008/D6																	
T0-9	TL	M108/D6																	
T0-9	TL	M109/D1																	
T0-9	TL	M208/D6																	
T0-9	TL	M210/D6,H6																	
T0-9	TL	M211/C5,G5																	
T0-9	TL	M308/D6																	
T0-9	TL	M309/D5																	
T0-9	TL	M408/D6																	
T0-9	TL	M509/D1																	
T0-9	TL	M608/D7																	
T0-9	TL	N008/D3																	

* FOR EXPLANATION OF EQPT LOC; REFER TO SHEET NOTE 1 ON SHEET A701.

ISSUE	DWG SIZE	
5	C2	APPARATUS INDEX

A712 SFD-10-01

BELL LABORATORIES

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
+-	M010/G6	VM TST	TKL					
+-105V	M010/H7	TKL	PRTD					
+130	K115/A8	CM	MISC					
+130	P318/D1,E1	AMRST	MISC					
+130(E)	K129/E5	PRTD	DTM					
+130(E)	K129/E5	PRTD	CM					
A	L210/A6	AMRST	MTC					
A0,1,2,4,7	K120/A6	MTC	MTFC	CM	ORMC			
A0,1,2,4,7	K120/B8	CM	IRMC					
A0,1,2,4,7	K207/B5	CM	OSC	OS				
A0,1,2,4,7	K804/A7	MTC	MTFC	PRT				
A0,1,2,4,7	L116/A4-C4	AMRST	MTC					
A0,1,2,4,7	L122/A3	MTC	MTFC	CM				
A0,1,2,4,7	L122/A3	MTC	MTFC	AMRST				
A0,1,2,4,7	L122/A6	CM	OSC	OS				
A0,1,2,4,7	L316/A2	AMRST	MTFC	CM	ORMC	OR		
A0,1,2,4,7	L317/A2	AMRST	MTFC	CM	IRMC	IR		
A0,1,2,4,7	P312/A1	AMRST	MTFC	CM	ORMC	OR		
A0,1,2,4,7	P312/A1	AMRST	MTFC	CM	IRMC	IR		
A0,1,2,4,7	P313/B5	CM	OSC	OS				
A'0,1,2,4,7	K207/B4	CM	MTFC					
A'0,1,2,4,7	L116/B3-C3	AMRST	MTFC					
A'0,1,2,4,7	L236/F6	AMRST	MTFC					
A'0,1,2,4,7	P313/B5	CM	MTFC					
AA	K406/H0	PCMB	NG					
AA0-9	L217/E0	MTC	AMRST					
AB	K406/G0	PCMB	NG					
AB	L113/F7	AMRST	MTC					
AB	L315/C6	MTC	AMRST					
AC-DC	K620/D9	DTM	PRTD					
AC-DC	K621/C9	CM	PRTD					
AC-DC	K621/E8	CM	JLK					
AD	L214/G5	AMRST	MTC					
ADK	L216/C3	AMRST	MTC					
AD1	L214/G5	AMRST	MTC					
AD3	L214/G6	AMRST	MTC					
AD4	L214/G7	AMRST	MTC					
AK	L217/C0	AMRST	MTC					
AL	L325/D8	AMRST	MTC					
AL	M209/F5	IT SW	TP					
ALC	K317/A6	CM	TLC	TL				
AMB	K115/E7	CM	JLK					
APU0-5	L216/E4	MTC	AMRST					
AR	K115/C8	CM	MISC					
ART	K620/C6	DTM	TLC	TL				
ART	K621/B5	CM	TLC	TL				
ASB	K206/E2	MTC	CM					
ASM	K317/G6	CM	TLC	TL				
AST	K616/C8	DTM	TLC	TL				
AST	K617/B9	TL	TLC	CM				
ATT	K620/C5	DTM	TLC	TL				
ATT	K621/B5	CM	TLC	TL				
AV	J103/B4	MTC	AMRST					
AV	J103/C4	MTC	ST					
AV	K205/G7	CM	OSC	OS				
AV	L219/G7	AMRST	MTC					
AVA	L214/G3	AMRST	MTC					
AVB	L214/G4	AMRST	MTC					
AVD	L214/G5	AMRST	MTC					
AVD1	L214/G5	AMRST	MTC					
AVD3	L214/G6	AMRST	MTC					
AVK1	K206/E8	CM	MTFC					
A0-11	K206/F5	OSGR	CM					
A1K	L216/C4	AMRST	MTC					
A3K	L216/C5	AMRST	MTC					
A4K	L216/C6	AMRST	MTC					
B	L112/D3	IRL	AMRST					
B	L210/B6	AMRST	MTC					
B	M110/C6	RSW	IAO					
B	M410/C5	RSW	IT					
B	M510/C5	RSW	IMGT					
B0,1,2,4,7	K120/F6	MTC	MTFC	CM	ORMC			
B0,1,2,4,7	K120/F8	CM	IRMC					
B0,1,2,4,7	K207/C5	CM	OSC	OS				
B0,1,2,4,7	K804/E7	MTC	MTFC	PRT				
B0,1,2,4,7	L116/C4	AMRST	MTC					
B0,1,2,4,7	L122/C3	MTC	MTFC	AMRST				

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
B0,1,2,4,7	L122/C3	MTC	MTFC	CM				
B0,1,2,4,7	L122/C6	CM	OSC	OS				
B0,1,2,4,7	L316/B2	AMRST	MTFC	CM	ORMC'	OR		
B0,1,2,4,7	L317/A2	AMRST	MTFC	CM	IRMC	IR		
B0,1,2,4,7	P312/B1	AMRST	MTFC	CM	IRMC	IR		
B0,1,2,4,7	P312/B1	AMRST	MTFC	CM	ORMC	OR		
B0,1,2,4,7	P313/C5	CM	OSC	OS				
B'0,1,2,4,7	K207/C4	CM	MTFC					
B'0,1,2,4,7	L116/C3	AMRST	MTFC					
B'0,1,2,4,7	L236/F8	AMRST	MTFC					
B'0,1,2,4,7	P313/C5	CM	MTFC					
BAT1,2	L232/G9,H9	SR	AMRST					
BAT1,2	P210/D0	MFSR	AMRST					
BA0-9	L217/E1	MTC	AMRST					
BK	L217/C1	AMRST	MTC					
BL	L111/F4	AMRST	OR					
BL	L114/B3	AMRST	IRL	IR				
BLC	K317/B1	MTC	MTFC	CM	TLC	TL		
BLG	P110/G7	AMRST	IR					
BN	K413/F4	MTC	MTFC	CM				
BP	L214/G4	AMRST	MTC					
BPK	L216/C3	AMRST	MTC					
BRT	K621/B5	CM	TLC	TL				
BS	K513/D7	DTM	LLC	LL				
BS	K515/B4	LL	LLC	CM				
BS	L111/B4	AMRST	IR					
BS	L117/A1	AMRST	OS					
BS	P110/B7-E7	AMRST	IR					
BS	P114/D2	AMRST	OS					
BS	P114/D4	OR	AMRST					
BSM	K317/H6	CM	TLC	TL				
BST	K617/B9	TL	TLC	CM	MTFC	MTC		
BS0,1	K510/A6-C7	CM	LLC					
BS0,1	K510/E6-G7	DTM	LLC					
BS0-4	K306/B1-B3	TLC	DTM					
BS0-4	K307/B0-B2	TLC	CM					
BS1-4	K406/A2,B2	NGC	CM					
BT	K107/B4	MTC	MTFC	DTM				
BT	K312/D9	TL	OR					
BT	K313/D9	TL	OGT					
BT	K313/F9	TL	IAO					
BT	K712/B4	MTC	MTFC	DTM				
BT	K713/B3	MTC	MTFC	CM				
BTT	K621/B5	CM	TLC	TL				
BT0-9	K312/C6	DTM	TLC	TL				
BT00-19	K313/C6	CM	TLC	TL				
B1,2	K313/C9	OGT	JLK					
C	J118/E7	TDC	MTFC					
C	L210/B6	AMRST	MTC					
C0,1,2,4,7	K121/A5	MTC	MTFC	CM	ORMC			
C0,1,2,4,7	K121/A7	CM	IRMC					
C0,1,2,4,7	K207/D5	CM	OSC	OS				
C0,1,2,4,7	K804/F7	MTC	MTFC	PRT				
C0,1,2,4,7	L116/D4	AMRST	MTC					
C0,1,2,4,7	L122/C3	MTC	MTFC	CM				
C0,1,2,4,7	L122/C3	MTC	MTFC	AMRST				
C0,1,2,4,7	L122/C6	CM	OSC	OS				
C0,1,2,4,7	L316/B2	AMRST	MTFC	CM	ORMC	OR		
C0,1,2,4,7	L317/B2	AMRST	MTFC	CM	IRMC	IR		
C0,1,2,4,7	P312/B1	AMRST	MTFC	CM	IRMC	IR		
C0,1,2,4,7	P312/B1	AMRST	MTFC	CM	ORMC	OR		
C0,1,2,4,7	P313/C5	CM	OSC	OS				
C'0,1,2,4,7	K207/D4	CM	MTFC					
C'0,1,2,4,7	L116/D3	AMRST	MTFC					
C'0,1,2,4,7	L236/F9	AMRST	MTFC					
C'0,1,2,4,7	P313/C5	CM	MTFC					
CA0-9	L217/E2	MTC	AMRST					
CCT	K612/D2	JLK	CM					
CCT	K612/D2	JLK	DTM					
CCT	K620/G6	JLK	DTM					
CGA	K125/B5	MTC	MTFC	CM				
CGA	K516/F4	MTC	DTM	LLC	LL			
CGA	K517/E4	MTC	DTM	LLC	LL			
CGA	K518/E2	MTC	CM	LLC	LL			
CGA	M111/E2	MTC	CM	LLC	LL			
CGA	M112/E2	MTC	CM	LLC	LL			
CGA1	K516/F4	MTC	DTM					

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
CGA1	K517/F4	MTC	DTM					
CGB	K125/D5	MTC	MTFC	CM				
CGB	K516/G4	MTC	DTM	LLC	LL			
CGB	K517/F4	MTC	DTM	LLC	LL			
CGB	K518/F2	MTC	CM	LLC	LL			
CGB	M111/F2	MTC	CM	LLC	LL			
CGB	M112/E2	MTC	CM	LLC	LL			
CGB1	K516/F4	MTC	DTM					
CGB1	K517/F4	MTC	DTM					
CGT	K612/B2	MTFC	CM					
CGT	K612/E2	JLK	CM					
CHA	K605/E4	MTFC	CM					
CH0-9	K604/E6-H6	MTFC	DTM					
CH0-9	K605/E4-E7	MTFC	CM					
CI	J108/A1	AMRST	MTFC	DTM				
CI	J108/A1	AMRST	MTFC	CM				
CI	J110/C0	MTFC	MTMG					
CI	J111/D2	TV	MTFC					
CI	J112/A1	AMRST	MTFC	DTM				
CI	J112/A1	AMRST	MTFC	CM				
CI	J114/C0	MTFC	MTMG					
CI	J115/E1	TV	MTFC					
CI	K707/37	CM	MTFC					
CI	L309/E7	AMRST	MTFC					
CI	P307/A6	AMRST	MTFC					
CIB	J108/G2	MTFC	MTC					
CIB	J112/F2	MTFC	MTC					
CK	K306/C4	CM	PCMB					
CK	K306/D3	MTFC	DTM	PCMB				
CK	K307/A6	DTM	PCMB					
CK	K307/B4	MTFC	CM	PCMB				
CK	L217/C2	AMRST	MTC					
CKG	K106/F3	MTFC	DTM					
CKG	K117/H2	MTFC	CM					
CKG	K708/C6	DTM	MTFC					
CKG1	K117/H1	MTC	MTFC	CM				
CKG1	K711/D9	CM	MTFC	MTC				
CKG2	K106/E2	MTC	MTFC	DTM				
CKG2	K708/C8	DTM	MTFC	MTC				
CL	L315/C3	MTC	AMRST					
CL	L322/B5	MTC	AMRST					
CL0-10	L113/D2	IR	IRL					
CL1-8	L119/C2	AMRST	MTFC	CM	OSC	OS		
CL1-8	P315/C2	AMRST	MTFC	CM	OSC	OS		
CMA-C	K807/E5-G5	PRT	MTFC	MTC				
CM3	K807/D5	PRT	MTFC	MTC				
CN	K206/A6	AMRST	OS	OSC	MTFC			
CN	L326/D5	AMRST	OR	MTFC				
CN	L326/E5	AMRST	IR	MTFC				
CN	L326/G5	AMRST	OS	MTFC				
CN	P317/E5	AMRST	OR	AMRST	MTFC			
CN	P317/F5	AMRST	IR	AMRST	MTFC			
CN	P317/G5	AMRST	OS	AMRST	MTFC			
CNG	K206/A8	OSC	MTFC					
CNR	K124/E3	MTC	MTFC	CM				
CON	K612/C2	MTC	MTFC	DTM				
CON	K612/C2	MTC	MTFC	CM				
CON	K620/H4	MTFC	DTM					
CR	124/D3	MTC	MTFC	CM				
CS	M008/F9	OGT	TL	OGT	M009/D1	TT		
CS	M308/E2	TT	TL	OGT				
CSG1,2	K516/A4,B4	MTC	MTFC	DTM				
CSG1,2	K517/A4,B4	MTC	MTFC	DTM				
CSG1,2	K518/A2	MTC	MTFC	CM				
CSG1,2	K519/A2	MTC	MTFC	CM				
CSG1,2	M111/A2	MTC	MTFC	CM				
CSG1,2	M112/A2	MTC	MTFC	CM				
CSG2	M111/B2	MTC	MTFC					
CSG2	M112/B2	MTC	MTFC					
CS0-19	K516/C4	MTC	MTFC	DTM	LLC	LL		
CS0-19	K517/D4	MTC	MTFC	DTM	LLC	LL		
CS0-19	K519/C3,D3	MTFC	CM	LLC	LL			
CS0-29	K518/B3,C3	MTFC	CM	LLC	LL			
CS0-29	M111/B2,C2	MTC	MTFC	CM	LLC	LL		
CS0-29	M112/C2,D2	MTC	MTFC	CM	LLC	LL		
CTA0,1,2,4,7	K125/B5	MTC	MTFC	CM				
CT0-2	K516/D5,E5	MTFC	DTM					

LEAD INDEX

DWG SIZE	ISSUE
C2	5

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
CU0,1,2,4,7	K125/F5	MTC	MTFC	CM				
CO	J110/CO	MTFC	MTMG					
CO	J114/CO	MTFC	MTMG					
CO	L113/D2	IR	IRL	AMRST				
CO	M309/E2	IT	IRL					
CO	M408/D3	IT	IRL					
CO	M708/D3	ITT	IRL					
CO-10	L113/D4	IRL	AMRST					
D	K106/D1	MTC	MTFC					
D	K106/D2	MTC	MTFC	DTM				
D	K119/A1	CM	MTFC	MTC				
D	L210/C6	AMRST	MTC					
D	L308/A4	AMRST	IRL	IR				
D	L311/E2	AMRST	MTFC	CM	ORMC	OR		
D	M309/E1	IT	IRL					
D	M408/D2	IT	IRL					
D	M708/D1	ITT	IRL					
D0,1,2,4,7	K121/D5	MTC	MTFC	CM	ORMC			
D0,1,2,4,7	K121/D7	CM	IRMC					
D0,1,2,4,7	K207/D5	CM	OSC	OS				
D0,1,2,4,7	L116/D4	AMRST	MTC					
D0,1,2,4,7	L122/D3	MTC	MTFC	AMRST				
D0,1,2,4,7	L122/D3	MTC	MTFC	CM	OSC	OS		
D0,1,2,4,7	L316/C2	AMRST	MTFC	CM	ORMC	OR		
D0,1,2,4,7	L317/D2	AMRST	MTFC	CM	IRMC	IR		
D0,1,2,4,7	P312/C1	AMRST	MTFC	CM	IRMC	IR		
D0,1,2,4,7	P312/C1	AMRST	MTFC	CM	ORMC	OR		
D0,1,2,4,7	P313/D5	CM	OSC	OS				
D'0,1,2,4,7	K207/D4	CM	MTFC					
D'0,1,2,4,7	L116/E3	AMRST	MTFC					
D'0,1,2,4,7	L237/F1	AMRST	MTFC					
D'0,1,2,4,7	P217/G0	AMRST	MTFC					
D'0,1,2,4,7	P313/D5	CM	MTFC					
DA0-9	L217/E2	MTC	AMRST					
DCK	K118/D4	MTC	MTFC	CM				
DCK	L313/B2	AMRST	MTFC	CM	IRMC	IR		
DCT	K708/C1	DTM	MTFC	MTC				
DCT	K710/D2	[illegible]	MTFC	MTC				
DCT	K710/F3	MTC	TT					
DCT1	K708/C2	DTM	MTFC					
DCT1	K710/CM	MTFC						
DIS	K708/C6	DTM	MTFC	MTC				
DIS	K711/D6	CM	MTFC	MTC				
DIS	L319/C6	AMRST	CM					
DIS1	K708/C5	DTM	MTFC	MTC				
DIS1	K711/D6	CM	MTFC	MTC				
DIS1	P317/A8	CM	MTFC					
DK	L217/C2	AMRST	MTC					
DL	K707/F8	CM	MTFC					
DL	K808/F1	JLK	PRT					
DL	L125/B6	JLK	AMRST					
DL	P307/D3	AMRST	JLK					
DLB	K707/F8	CM	JLK					
DLB	K808/E1	JLK	PRT					
DLB	L125/B6	JLK	AMRST					
DLB	P307/D3	AMRST	JLK					
DL1-3	L119/G2	AMRST	MTFC	CM	OSC	OS		
DL1-3	P315/G2	AMRST	MTFC	CM	OSC	OS		
DOR	L107/C2	MTC	AMRST					
DOS	L117/B1	AMRST	OS					
DPG	L113/H2	IR	IRL					
DPG	L113/H2	IR	AMRST					
DPG	P108/H3	IRL	IR					
DR-	K115/G0	PRF	MTFC					
DRT0,1	K115/G0,H0	PRF	MTFC					
DRT0,1	L310/G2	AMRST	MTFC					
DRT0,1	P308/G2	AMRST	MTFC					
DR0-9	L310/F2	AMRST	MTFC					
DR0-9	P308/F2	AMRST	MTFC					
DTK	K520/A0	MTFC	CM	LLC	LL			
DTK	K607/H1	MTC	MTFC	DTM				
DOS	P112/C2	AMRST	OS					
D2	L231/C0	OS	MFCS					
E	L210/D6	AMRST	MTC					
E0,1,2,4,7	K122/A5	MTC	MTFC	CM	ORMC			
E0,1,2,4,7	K122/A7	CM	IRMC					
E0,1,2,4,7	K207/E5	CM	OSC	OS				
E0,1,2,4,7	L116/E4	AMRST	MTC					
E0,1,2,4,7	L122/E3	MTC	MTFC	CM	OSC	OS		
E0,1,2,4,7	L122/E3	MTC	MTFC	AMRST				
E0,1,2,4,7	L316/C2	AMRST	MTFC	CM	ORMC	OR		
E0,1,2,4,7	L317/C2	AMRST	MTFC	CM	IRMC	IR		
E0,1,2,4,7	P312/D1	AMRST	MTFC	CM	ORMC	OR		
E0,1,2,4,7	P312/D1	AMRST	MTFC	CM	IRMC	IR		
E0,1,2,4,7	P313/D5	CM	OSC	OS				
E'0,1,2,4,7	K207/D4	CM	MTFC					
E'0,1,2,4,7	L116/E3	AMRST	MTFC					
E'0,1,2,4,7	L237/F2	AMRST	MTFC					
E'0,1,2,4,7	P217/G1	AMRST	MTFC					
E'0,1,2,4,7	P313/D5	CM	MTFC					
EC-	N009/C7	VM TST	5A TM					
EC-	N009/C7	VM TST	TN GN					
ECN	K118/H4	MTC	MTFC	CM				
EF	K609/G1	TL	TLC	CM	MTFC			
EF	K609/G1	TL	TLC	DTM	MTFC			
EK	L217/C3	AMRST	MTC					
ETS0,1	K312/E2	MTC	DTM					
ETS0,1	K313/E2	MTC	CM					
EX	K128/G6	DTM	JLK					
EX	K128/G6	CM	JLK					
EX	K128/H6	DTM	P-REG					
EX	K128/H6	CM	P-REG					
EXA	K128/G6	CM	JLK					
EXA	K128/G6	DTM	JLK					
EXB	K128/B3	MTFC	DTM					
EXB	K128/B3	MTFC	CM					
EXG	K128/A3	MTFC	DTM					
EXG	K128/A3	MTFC	CM					
EXT	K128/C2	MTC	MTFC	CM				
EXT	K128/C2	MTC	MTFC	DTM				
F	K312/D9	TL	OR					
F	K313/E9	TL	OGT					
F	K313/F9	TL	IAO					
F	K316/A4	MTC	MTFC	CM				
F	L210/D6	AMRST	MTC					
F0,1,2,4,7	K122/D5	MTC	MTFC	CM	ORMC			
F0,1,2,4,7	K122/D7	CM	IRMC					
F0,1,2,4,7	K207/E5	CM	OSC	OS				
F0,1,2,4,7	L116/F4	AMRST	MTC					
F0,1,2,4,7	L123/B3	MTC	MTFC	CM	OSC	OS		
F0,1,2,4,7	L123/B3	MTC	MTFC	AMRST				
F0,1,2,4,7	L316/D2	AMRST	MTFC	CM	ORMC	OR		
F0,1,2,4,7	L317/D2	AMRST	MTFC	CM	IRMC	IR		
F0,1,2,4,7	P312/D1	AMRST	MTFC	CM	ORMC	OR		
F0,1,2,4,7	P312/D1	AMRST	MTFC	CM	IRMC	IR		
F0,1,2,4,7	P313/E5	CM	OSC	OS				
F'0,1,2,4,7	K207/E4	CM	MTFC					
F'0,1,2,4,7	L116/F3	AMRST	MTFC					
F'0,1,2,4,7	L237/F3	AMRST	MTFC					
F'0,1,2,4,7	P217/G3	AMRST	MTFC					
F'0,1,2,4,7	P313/E5	CM	MTFC					
F'7	K207/E4	CM	MTFC					
FA	K115/B8	CM	MISC					
FA	K317/B8	TL	IAO					
FA	K317/B8	TL	OGT					
FA	K317/D8	TL	OR					
FA	M510/G3	TL	IMGT					
FA	P318/A1-C1	AMRST	MISC					
FAC	K118/B4	MTC	MTFC	CM				
FAK	K317/C2	MTFC	CM	TLC	TL			
FAK	L118/A4	AMRST	MTFC	CM	TLC	TL		
FAK	P309/C2	AMRST	MTFC	CM	TLC	TL		
FA1	K115/B8	CM	MISC					
FA1	P318/B1-D1	AMRST	MISC	ALM				
FBK	K317/D2	MTC	MTFC	CM	TLC	TL		
FBK	L118/B4	AMRST	MTFC	CM	TLC	TL		
FBK	P309/E2	AMRST	MTFC	CM	TLC	TL		
FB0-29	K304/C0-C9	TLC	DTM					
FB0-29	K305/C1-C9	TLC	CM					
FCG	K620/E4	MTFC	DTM					
FCG	K621/D4	MTFC	CM					
FCK	K107/H4	MTC	MTFC	DTM				
FCK	K311/G8	CM	MTFC	MTC				
FG	K115/B8	CM	MISC					
FG	K115/D8	CM	JLK					
FG0-2	K127/A3,B3	MTC	MTFC	CM				
FG0-2	K307/F6	CM	MTFC	MTC				
FG0-2	L113/G2	IR	IRL					
FG0-2	L314/A2	AMRST	MTFC	CM	IRMC	IR		
FG00-2	P309/A2	AMRST	MTFC	CM	IRMC	IR		
FK	K611/C3	DTM	TLC	OR				
FK	L217/C4	AMRST	MTC					
FL	M410/C6	RSW	IT					
FL	M510/C6	RSW	IMGT					
FLG	K117/C6	MTFC	CM					
FM	K604/E2	MTFC	DTM					
FM	K605/E2	MTFC	CM					
FM	K607/A1	MTFC	CM					
FML	K309/D8	CM	MTFC					
FR	K206/B6	AMRST	OS	OSC	MTFC			
FR	L326/D5	AMRST	OR	MTFC				
FR	L326/E5	AMRST	IR	MTFC				
FR	L326/F5	AMRST	OS	MTFC				
FR	P317/E5	AMRST	OR	AMRST	MTFC			
FR	P317/F5	AMRST	IR	AMRST	MTFC			
FR	P317/G5	AMRST	OS	AMRST	MTFC			
FRG	K206/B8	OSC	MTFC					
FS0-29	L118/D4	AMRST	MTFC	CM				
FS0-29	P309/F2-H2	AMRST	MTFC	CM				
FT'-	K109/B5	MTFC	CM					
FT0-3	P308/A2	AMRST	MTFC	CM	ORMC	OR		
FT'0-3	L120/A3	MTFC	CM					
FTC	K107/G4	MTC	MTFC	DTM				
FTC	K309/E4	CM	MTFC	MTC				
FTC-	K304/C1-C9	TL	DTM	MTC				
FTCK	K107/G4	MTC	MTFC	DTM				
FTCK	K309/E4	CM	MTFC	MTC				
FTC0-29	K305/C0-C8	TL	CM	MTC				
FTK1	K508/C5	CM	MTFC					
FTK1	K512/G5	MTFC	DTM					
FTK1	M110/H7	CM	MTFC					
FTT0-5	K408/G3	MTFC	CM					
FTT0-5	K504/A5-G5	DTM	MTFC					
FTT0-5	K506/B3	MTC	MTFC	CM				
FTT0-5	M109/A9,B9	MTC	N110/A0	MTFC	CM			
FTT0-5	M110/B0,C0	MTC	MTFC					
FT0-3	K108/B5	MTC	MTFC	DTM				
FT0-3	K109/B5	MTC	MTFC	CM	OSC	OS		
FT0-3	L120/A2	MTC	MTFC	AMRST				
FT0-3	L120/A2	MTC	MTFC	CM	OSC	OS		
FT0-3	L310/B2	AMRST	MTFC	CM	ORMC	OR		
FT0'-3'	L310/B3	MTFC	CM					
FT0-5	M108/A7,B7	NG	NGC	CM				
FU0,1,2,4,7	K108/E5	MTC	MTFC	DTM				
FU0,1,2,4,7	K109/E5	MTC	MTFC	CM	OSC	OS		
FU0,1,2,4,7	L120/B2	MTC	MTFC	CM	OSC	OS		
FU0,1,2,4,7	L120/B2	MTC	MTFC	AMRST				
FU0,1,2,4,7	L310/C2	AMRST	MTFC	CM	ORMC	OR		
FU0,1,2,4,7	P308/B2	AMRST	MTFC	CM	ORMC	OR		
FU'0,1,2,4,7	K109/D5	MTFC	CM					
FU'0,1,2,4,7	L120/B3	MTFC	CM					
FU'0,1,2,4,7	L310/C3	MTFC	CM					
FUT-	M110/C2	MTFC	CM					
FUT0-9	K408/H3	MTFC	CM					
FUT0-9	K504/A1-G1	DTM	MTFC					
FUT0-9	K506/E3	MTC	MTFC	CM				
FUT0-9	M109/B9,C9	MTC	N110/C0	MTFC	CM			
FUT0-9	M110/C0	MTC	MTFC					
FU0-9	M108/B7	NG	NGC	CM				
FVD	K116/D5	MTC	MTFC	CM				
FVD	L312/C3	AMRST	MTFC	CM	IRMC	IR		
F7	K207/E5	CM	OSC	OS				
G	K520/B3	CM	LLC	LL				
G	K607/H1	MTC	MTFC	DTM				
G	L210/E6	AMRST	MTC					
G	M110/C6	RSW	IAO					
G	M212/C2	M-AMPL	T-TERM					
G	M410/C5	RSW	IT					
G	M510/C5	RSW	IMGT					
G	N010/F3	TT	TKL	VM TST				
G0,1,2,4,7	K122/G5	MTC	MTFC	CM	ORMC			

ISSUE	DWG SIZE	LEAD INDEX
5	C2	

A802 SFD-10-01 BELL LABORATORIES

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
G0,1,2,4,7	K122/G7	CM	IRMC					
G0,1,2,4,7	K207/F5	CM	OSC	OS				
G0,1,2,4,7	L116/F4	AMRST	MTC					
G0,1,2,4,7	L123/B3	MTC	MTFC	CM	OSC	OS		
G0,1,2,4,7	L123/B3	MTC	MTFC	AMRST				
G0,1,2,4,7	L316/E2	AMRST	MTFC	CM	ORMC	OR		
G0,1,2,4,7	L317/E2	AMRST	MTFC	CM	IRMC	IR		
G0,1,2,4,7	P312/E1	AMRST	MTFC	CM	ORMC	OR		
G0,1,2,4,7	P312/E1	AMRST	MTFC	CM	IRMC	IR		
G0,1,2,4,7	P313/F5	CM	OSC	OS				
G'0,1,2,4,7	K207/F4	CM	MTFC					
G'0,1,2,4,7	L116/F3	AMRST	MTFC					
G'0,1,2,4,7	L237/F4	AMRST	MTFC					
G'0,1,2,4,7	P217/G4	AMRST	MTFC					
G'0,1,2,4,7	P313/F5	CM	MTFC					
GBO/GBE	K204/A6,H6	CM	OSC					
GK	L217/C4	AMRST	MTC					
GLH	K612/A2	MTFC	DTM					
GLH	K612/A2	MTFC	CM					
GLH	K613/H6	DTM	MTFC					
GR	K810/G4	MTC	MTFC	PRT				
GTL	K106/H3	MTFC	DTM					
GTL	K118/F5	MTFC	CM					
GTL	K611/B3	MTFC	DTM					
GT2	K612/B2	MTFC	CM					
GT2	K613/G6	DTM	MTFC					
GT5	K612/A2	MTFC	CM					
GT5	K612/A2	MTFC	DTM					
G1	K810/H5	MTFC	PRT					
G1T	K810/H4	MTC	MTFC					
H	K615/D7	NTC	LL					
H	L208/A4	AMRST	OR					
H	L208/B4	AMRST	OS					
H	L208/D4	AMRST	IR					
H	L210/E6	AMRST	MTC					
H	L234/B1	MFSR	AMRST					
H	M110/C6	RSW	IAO					
H	M212/G5	TTL	T-TERM					
H	M410/C6	RSW	IT					
H	M510/C6	RSW	IMGT					
H	P108/C2	AMRST	OR					
H	P108/D2	AMRST	OS					
H	P108/F3	AMRST	IR					
H	P210/B0	MFSR	AMRST					
H0,1,2,4,7	K123/A5	MTC	MTFC	CM	ORMC			
H0,1,2,4,7	K123/A7	CM	IRMC					
H0,1,2,4,7	K207/G5	CM	OSC	OS				
H0,1,2,4,7	L116/G4	AMRST	MTC					
H0,1,2,4,7	L123/C3	MTC	MTFC	CM	OSC	OS		
H0,1,2,4,7	L123/C3	MTC	MTFC	AMRST				
H0,1,2,4,7	L316/E2	AMRST	MTFC	CM	ORMC	OR		
H0,1,2,4,7	L317/E2	AMRST	MTFC	CM	IRMC	IR		
H0,1,2,4,7	P312/E1	AMRST	MTFC	CM	ORMC	OR		
H0,1,2,4,7	P312/E1	AMRST	MTFC	CM	IRMC	IR		
H0,1,2,4,7	P313/G5	CM	OSC	OS				
H'0,1,2,4,7	K207/G4	CM	MTFC					
H'0,1,2,4,7	L116/G3	AMRST	MTFC					
H'0,1,2,4,7	L237/F5	AMRST	MTFC					
H'0,1,2,4,7	P217/G5	AMRST	MTFC					
H'0,1,2,4,7	P313/G5	CM	MTFC					
HD	K810/C4	MTC	MTFC	PRT				
HF	K409/H4	MTC	MTFC	CM				
HG0,1,2,4,7	K113/B5	MTC	MTFC	CM	OSC	OS		
HG-	K513/A7	DTM	LLC	LL				
HG0,1,2,4,7	L120/D2	MTC	MTFC	CM	OSC	OS		
HG0,1,2,4,7	L120/D2	MTC	MTFC	AMRST				
HG0,1,2,4,7	L310/D2	AMRST	MTFC	CM	ORMC	OR		
HG0,1,2,4,7	P308/C2	AMRST	MTFC	CM	ORMC	OR		
HG'0,1,2,4,7	K113/B6	MTFC	[illegible]					
HG'0,1,2,4,7	L120/D3	MTFC	CM					
HG'0,1,2,4,7	L310/D3	MTFC	CM					
HGK	K513/C3	MTC	MTFC	DTM				
HGK	K513/C7	DTM	LLC	LL				
HGK	K515/E4	LL	LLC	CM				
HGK	K515/F7	CM	MTFC					
HGT-	N110/E2	MTFC	CM					
HGT0-9	K112/A5-D5	MTFC	DTM					
HGT0-9	K508/A4	MTC	MTFC	CM				
HGT0-9	N109/E9,F9	MTC	N110/E0	MTFC	CM			
HGT0-9	N110/E0,F0	MTC	MTFC					
HG0-9	K515/C4	LL	LLC	CM				
HG0-9	N108/C7	NG	NGC	CM				
HK	L217/C5	AMRST	MTC					
HM	K205/E8	OGT	OSL	OS				
HM	L113/B2	IR	IRL	AMRST				
HM	M209/D5	IT SW	OT&P					
HMS1	K613/A8	CM	MTFC	MTC				
HMS1	K613/A8	CM	MTFC	MTC				
HMS1	K613/E6	DTM	MTFC	MTC				
HMS1	K613/E6	DTM	MTFC	MTC				
HMS1	L117/F7	AMRST	MTFC	CM				
HMS1	P307/F6	AMRST	MTFC	CM				
HTK1	K508/D5	CM	MTFC					
HTK1	K513/A3	MTFC	DTM					
HTK1	N110/H7	CM	MTFC					
HTR	K129/E1	MTC	MTFC	CM				
HTR	K129/G1	MTC	MTFC	DTM				
HT1	M009/A8	TT	PRTD					
HT1	M109/A9	TT	PRTD					
HT1	M409/A8	TT	PRTD					
HT1	M509/B9	TN GN						
HT1	M609/B8	TT	TN GN					
HT1	M709/A8	TT	TN GN					
HT3	P206/F4	AMRST	TN GN					
I	J118/D7	TDC	MTFC					
ICL	L315/C0	MTC	AMRST					
INC	K116/F5	MTC	MTFC	CM				
INC	L312/D3	AMRST	MTFC	CM	IRMC	IR		
INC	L315/C1	MTC	AMRST					
IR	P317/E1	P-REG	AMRST					
IRF	P317/F1	P-REG	AMRST					
ITD0	M308/G2	TT	MTC					
ITNP	M408/G7	TT	MTC					
ITNP	M709/F3	TT	MTC					
ITR	K117/A2	MTFC	CM					
J	L210/F6	AMRST	MTC					
J	L234/D1	MFSR	AMRST					
J	P210/C0	MFSR	AMRST					
J0,1,2,4,7	K123/C4	MTC	MTFC	CM	ORMC			
J0,1,2,4,7	K123/C7	CM	IRMC					
J0,1,2,4,7	K207/G5	CM	OSC	OS				
J0,1,2,4,7	L116/G4	AMRST	MTC					
J0,1,2,4,7	L123/C3	MTC	MTFC	AMRST				
J0,1,2,4,7	L123/C3	MTC	MTFC	CM	OSC	OS		
J0,1,2,4,7	L316/F2	AMRST	MTFC	CM	ORMC	OR		
J0,1,2,4,7	L317/F2	AMRST	MTFC	CM	IRMC	IR		
J0,1,2,4,7	P312/F1	AMRST	MTFC	CM	ORMC	OR		
J0,1,2,4,7	P312/F1	AMRST	MTFC	CM	IRMC	IR		
J0,1,2,4,7	P313/G5	CM	OSC	OS				
J'0,1,2,4,7	K207/G4	CM	MTFC					
J'0,1,2,4,7	L116/G3	AMRST	MTFC					
J'0,1,2,4,7	L237/F6	AMRST	MTFC					
J'0,1,2,4,7	P217/G6	AMRST	MTFC					
J'0,1,2,4,7	P313/G5	CM	MTFC					
JCK	K604/G2	MTFC	DTM					
JCK	K605/E7	MTFC	CM					
JK	L217/C6	AMRST	MTC					
JS00-5	K104/B6,C6	MTC	MTFC	DTM				
JS00-5	K105/B6,C6	MTC	MTFC	CM				
JXPA	K613/E4	CM	MTFC					
JXP1	K613/D4	CM	MTFC					
J0-9	K616/C5	DTM	TLC	TL				
J0-9	K617/C5	CM	TLC	TL				
J0-9	K618/F4,F5	TL	TLC	DTM				
J0-9	K619/E4,E5	TL	TLC	CM				
K	L210/G6	AMRST	MTC					
K0,1,2,4,7	K123/C4	MTC	MTFC	CM	ORMC			
K0,1,2,4,7	K123/C7	CM	IRMC					
K0,1,2,4,7	K207/G5	CM	OSC	OS				
K0,1,2,4,7	L116/H4	AMRST	MTC					
K0,1,2,4,7	L123/D3	MTC	MTFC	CM	OSC	OS		
K0,1,2,4,7	L123/D3	MTC	MTFC	AMRST				
K0,1,2,4,7	L316/F2	AMRST	MTFC	CM	ORMC	OR		
K0,1,2,4,7	L317/F2	AMRST	MTFC	CM	IRMC	IR		
K0,1,2,4,7	P312/F1	AMRST	MTFC	CM	ORMC	OR		
K0,1,2,4,7	P312/F1	AMRST	MTFC	CM	IRMC	IR		
K0,1,2,4,7	P313/G5	CM	OSC	OS				
K'0,1,2,4,7	K207/G4	CM	MTFC					
K'0,1,2,4,7	L116/H3	AMRST	MTFC					
K'0,1,2,4,7	L237/F8	AMRST	MTFC					
K'0,1,2,4,7	P217/G7	AMRST	MTFC					
K'0,1,2,4,7	P313/G5	CM	MTFC					
KJSO	K104/F6	MTC	MTFC	DTM				
KJSO	K105/F6	MTC	MTFC	CM				
KK	L217/C6	AMRST	MTC					
L	J118/D6	MTFC	TDC					
L	K115/F9	JLK	ALMS					
L	K609/D1	TL	TLC	DTM				
L	K609/D1	TL	TLC	CM				
L	L210/G6	AMRST	MTC					
L	L234/C1	MFSR	AMRST					
L	N108/E3	CM	NGC	NG				
L	P210/B0	MFSR	AMRST					
L0,1,2,4,7	K123/D4	MTC	MTFC	CM	ORMC			
L0,1,2,4,7	K123/D7	CM	IRMC					
L0,1,2,4,7	K207/G5	CM	OSC	OS				
L0,1,2,4,7	L115/H4	AMRST	MTC					
L0,1,2,4,7	L123/D3	MTC	MTFC	AMRST				
L0,1,2,4,7	L123/D3	MTC	MTFC	CM	OSC	OS		
L0,1,2,4,7	L316/G2	AMRST	MTFC	CM	ORMC	OR		
L0,1,2,4,7	L317/G2	AMRST	MTFC	CM	IRMC	IR		
L0,1,2,4,7	P312/G1	AMRST	MTFC	CM	ORMC	OR		
L0,1,2,4,7	P312/G1	AMRST	MTFC	CM	IRMC	IR		
L0,1,2,4,7	P313/G5	CM	OSC	OS				
L'0,1,2,4,7	K207/G4	CM	MTFC					
L'0,1,2,4,7	L116/H3	AMRST	MTFC					
L'0,1,2,4,7	L237/F9	AMRST	MTFC					
L'0,1,2,4,7	P217/G8	AMRST	MTFC					
L'0,1,2,4,7	P313/G5	CM	MTFC					
LA	J109/D8	MTFC	LITC					
LA	J112/E4	MTFC	LITC					
LAL	J109/C8	MTFC	LITC					
LAL	J112/E4	MTFC	LITC					
LB	K613/E8	CM	MTFC					
LB	M212/C2	M-AMPL	T-TERM					
LB	M410/B7	RSW	OI					
LB	M510/B7	RSW	OI					
LBT	M410/A7	RSW	OI					
LBT	M510/A7	RSW	OI					
LB0-9	K616/C4	DTM	LLC	LL				
LB0-9	K618/F2,F3	LL	LLC	DTM				
LB0-9	K619/E2,E3	LL	LLC	CM				
LCH	K316/F5	MTFC	CM					
LCK	K317/B1	MTC	MTFC	CM	TLC	TL		
LC0-9	K317/F9	TL	MTFC					
LC0-9	L117/B7	AMRST	MTFC	TL				
LC0-9	P307/B6	AMRST	MTFC	TL				
LDT	K128/D3	MTFC	CM					
LDT	K128/D3	MTFC	DTM					
LFK	K513/E3	MTFC	DTM	LLC				
LFK	K514/C1,E1	MTFC	CM	LLC	ALL			
LFK	K515/A5	LLC	CM	MTFC				
LHC	J123/A1	CM	MTC					
LHM	K411/C0	CM	MTFC	MTC				
LHM	K614/C6	MTC	MTFC					
LHMT	K411/C0	CM	MTFC	MTC				
LHMT	K614/D6	MTC	MTFC					
LH0-4	K411/B0	LL	LLC	CM				
LH0-4	K616/C2	DTM	LLC	LL				
LH0-4	K617/C2	CM	LLC	LL				
LH0-9	K616/C7	DTM	TLC	TL				
LH0-9	K617/C7	CM	TLC	TL				
LH0-9	K618/F6-F8	TL	TLC	DTM				
LH0-9	K619/E6-E8	TL	TLC	CM				
LI	K613/D8	CM	MTFC					
LIN	K316/A5	MTFC	CM					
LK	K105/H5	MTC	VM TST					
LK	K306/F8	PCMB	ALMS					
LK	K307/E9	PCMB	ALMS					
LK	K313/A2	VM TST	MTC	TT				
LK	K407/A9	PCMB	ALMS					

LEAD INDEX

DWG SIZE	ISSUE
C2	5

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
LK	K511/A8	PCMB	ALMS					
LK	K609/D1	TL	TLC	DTM	MTFC			
LK	K609/D1	TL	TLC	CM	MTFC			
LK	L111/G4	AMRST	OR					
LK	L112/D1	IR	IRL	AMRST				
LK	L117/A1	AMRST	OS					
LK	L217/C7	AMRST	MTC					
LK	N008/E4	MTC	VM TST					
LK	P114/D3	OS	AMRST					
LK	P316/B8	JLK	AMRST					
LK1	K710/D5	CM	MTFC	MTC				
LK2	K708/C3	DTM	MTFC	MTC				
LK2	K711/D1	CM	MTFC	MTC				
LK2	P316/B7	ALMS	JLK	AMRST				
LK3	K708/C3	DTM	MTFC	MTC				
LK3	K711/D1	CM	MTFC	MTC				
LLF	J124/B7	MTC	CM	LLC	JLK			
LLF	J124/B7	MTC	DTM	LLC	JLK			
LLF	K510/A9,C9	JLK	LLC	CM	MTC			
LLF	K510/E9,G9	JLK	LLC	DTM	MTC			
LLJ	K616/F5	DTM	MTFC	MTC				
LLJ	K617/F5	CM	MTFC	MTC				
LL0-9	K412/D4	MTC	CM					
LL0-9	K618/F0,F1	LL	LLC	DTM				
LL0-9	K619/E0,E1	LL	LLC	CM				
LOB	K520/C3	CM	LLC	LL				
LOK	K520/B3	CM	LLC	LL				
LP	K206/H3	JLK	OS					
LR	K118/D4	MTC	MTFC	CM				
LR	L313/C2	AMRST	MTFC	CM	IRMC	IR		
LS	M608/E3	TT	MTC					
LT	K116/E5	MTC	MTFC	CM				
LT	K118/C4	MTC	MTFC	CM				
LT	K804/C7	MTC	MTFC	PRT				
LT	L121/C3	MTC	MTFC	CM				
LT	L121/C3	MTC	MTFC	AMRST				
LT	L311/H2	AMRST	MTFC	CM	ORMC	OR		
LT	L322/B2	MTC	AMRST					
LTP	J111/C2	LV	MTFC					
LTP	J115/D1	LV	MTFC					
LTR	K613/G6	DTM	MTFC					
LVF	K414/E3	MTC	MTFC					
LVM	K414/D3	MTC	MTFC					
LVP	J108/D3	MTFC	LV					
LVP	J115/C1	LV	MTFC					
LV0	P307/D6	AMRST	MTFC	TL				
LV0-9	K317/E9,F9	TL	MTFC					
LV0-9	L117/D7	AMRST	MTFC	TL				
LV0-9	P307/C6,E6	AMRST	MTFC	TL				
LXPA	K613/B8	CM	MTFC					
LXP1	K613/B8	CM	MTFC					
L0	K520/C3	CM	LLC	LL				
L0	L112/F1	IR	IRL					
L1	N008/G4	MTC	VM TST					
L2	N008/H4	MTC	VM TST					
M	K707/E0	MISC	TRC					
M	L111/A4	AMRST	IR					
M	L111/F6	OR	TLC	DTM	MTFC	MTC		
M	L117/A2	OS	OSC	CM				
M	L234/A1	MFSR	AMRST					
M	P110/A7	AMRST	IR					
M	P110/C7	AMRST	IR					
M	P110/E7	AMRST	IR					
M	P114/D1	AMRST	MTC	MTFC	DTM	TLC	OR	
M	P210/A0	MFSR	AMRST					
M	P212/B6	CM	MTFC					
M'0,1,2,4,7	P217/G9	AMRST	MTFC					
M'7	K207/G4	CM	MTFC					
M'7	P313/G5	CM	MTFC					
MA	K206/B4	OSC	CM					
MAK	K304/C0-C8	TLC	DTM					
MAK	K306/B0	TLC	DTM					
MAK	K307/B0	TLC	CM					
MAK1	K304/E1	DTM	MTFC	MTC				
MAK1	K305/E0	CM	MTFC	MTC				
MB	J117/A5	PRT	MTFC					
MB	J117/D0	JLK	CM	MTFC				

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
MB	J117/E0	JLK	DTM	MTFC				
MB	K115/C4	JLK	CM					
MB	K115/D3	MTFC	CM	PRTD				
MB	K206/B4	OSC	CM					
MB	K206/G3	JLK	OS					
MB	K312/C9	OR	JLK	TL				
MB	K313/B9	TL	OGT					
MB	K406/G0	PCMB	NG					
MB	K808/G3	JLK	PRT					
MB	L111/B4	AMRST	IR					
MB	P110/B7	AMRST	IR					
MB	P110/C7	AMRST	IR					
MB	P110/E7	AMRST	IR					
MB	P114/B8	AMRST	OR					
MBA/B	K206/G2	MTC	JLK					
MBL	K115/F7	CM	JLK					
MC	K206/B4	OSC	CM					
MC	K306/A4,B4	TLC	PCMB					
MC	K307/A5,B5	TLC	PCMB					
MC	K407/D0,G0	CM	PCMB					
MC	K407/D0,G0	NGC	PCMB					
MC	K511/C1,G1	LLC	PCMB					
MC	K511/C1,G1	CM	PCMB					
MC	L117/A8	AMRST	MTC					
MC	M009/F3	MTC	TT					
MC	M109/F3	MTC	TT					
MC	M208/F5	MTC	TT					
MC	M308/H2	TT	MTC					
MC	M408/H7	TT	MTC					
MC	M509/E1	MTC	TT					
MC	M609/E7	TT	MTC					
MC	M709/F3	TT	MTC					
MDK	K307/B0	TLC	CM					
MDK	K604/F5	DTM	TLC					
MF	K106/B2	MTC	MTFC	DTM				
MF	K106/D1	MTC	MTFC					
MF	K119/B1	CM	MTFC	MTC				
MF	L311/F2	AMRST	MTFC	CM	ORMC	OR		
MFK	K514/A4,D4	CM	LLC	PCMB	ALL			
MIR	L326/E2	AMRST	MTFC					
MIR	P307/H6	AMRST	MTFC					
MIT	J117/C5	CM	MTFC					
MIT	J117/F5	DTM	MTFC					
MIT	K115/E3	MTFC	CM					
MJ	K115/A9	MISC	ALM					
MJ	K406/G2	NG	ALM					
MK	L217/C9	AMRST	MTC					
MKA,B	J108/D7	DTM	MTFC					
MKA,B	J108/E1	CM	MTFC					
MKA,B	J112/D1,E1	CM	MTFC					
MKA,B	J112/D7	DTM	MTFC					
MKA,B	K707/B7,C7	CM	MTFC					
MKB	L309/A5	AMRST	CM	MTFC				
MKB	P306/A6	AMRST	CM	MTFC				
MKR	J118/C9	MTFC	PRF					
MKR	K115/F0	PRF	MTFC					
MKR-CM	K115/F0	PRF	MTFC					
MKS	J108/G4	MTFC	MTC					
MKS	J112/F4	MTFC	MTC					
MKT	J108/E5	MTFC	CM					
MKT-	J108/G5-G7	MTFC	MTC					
MKT-	J112/E5	MTFC	CM					
MKT-	J112/F4-F7	MTFC	MTC					
MKT0	J108/F1	CM	MTFC	MTC				
MKT0	J112/E1	CM	MTFC	MTC				
MLF	K106/B2	MTC	MTFC	DTM				
MLF	K106/C1	MTC	MTFC					
MLV	K105/D0	PRF	MTFC	MTC				
MN	K306/A8	ALM	PCMB					
MN	K307/A9	ALM	PCMB					
MN	K407/A0,E0	ALM	PCMB					
MN	K511/A1,E1	ALM	PCMB					
MN	K621/G8	ALM	JLK					
MN	L230/G6	AMRST	ALM					
MN	L325/D6	ALM	AMRST					
MN	P206/B9	AMRST	ALM					
MN	P316/A8	JLK	AMRST					

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
MON	L318/A3	AMRST	OR	ORMC	CM			
MON	L318/B3	AMRST	IR	IRMC	CM			
MON	L318/E5	AMRST	MTFC	CM				
MON	P112/G4	CM	AMRST					
MON	P212/B3	AMRST	OR	ORMC	CM			
MON	P212/C3	AMRST	IR	IRMC	CM			
MONL	L318/D6	AMRST	CM					
MONL	P212/A5	AMRST	CM					
MON0-9	P112/F3	AMRST	OSC	CM				
MON1	L309/B5	AMRST	CM					
MON1	P306/C6	AMRST	CM					
MOR	L326/E2	AMRST	MTFC					
MOR	P307/H6	AMRST	MTFC					
MOS	L117/B1	AMRST	OS					
MOS	L326/E2	AMRST	MTFC					
MOS	P112/C2	AMRST	OS					
MOS	P307/H6	AMRST	MTFC					
MPP	K514/F0	MTC	MTFC	CM	LLC	PCMB		
MPT	K412/A3	MTC	MTFC	CM				
MPT	K412/G6	MTFC	CM					
MP00,1	K514/F6	MTC	PCMB					
MP02	K514/G7	MTC	LL					
MRL	K708/C6	DTM	MTFC	MTC				
MRL	K713/C3	MTC	MTFC	CM				
MST	L308/B5	AMRST	IR					
MST	L308/D5	AMRST	OR					
MST	P108/C5	OR	AMRST					
MST	P108/G5	IR	AMRST					
MST1	L308/D5	AMRST	OR					
MST1	P212/F6	OR	AMRST					
MT	J123/C1	DTM	MTFC					
MTL	J108/G3	MTFC	MTC					
MTL	J112/F3	MTFC	MTC					
MTP	J108/G2	MTFC	MTC					
MTP	J112/F2	MTFC	MTC					
MTPT	J106/A9	MTC	MTFC					
MTPT	K810/B4	MTC	MTFC					
MTR	L326/G8	AMRST	CM					
MTR	P317/A4	AMRST	CM					
MTR1	L309/E7	AMRST	MTFC					
MTR1	P316/E5	AMRST	MTFC					
MT1K	K105/D6	MTC	MTFC	CM				
MT10	K411/D8	CM	MTC					
MT10K	K105/C6	MTC	MTFC	CM				
MT12	K208/F1	MTC	MTFC	CM				
MT2	J123/B1	CM	MTC					
MT2K	K104/E6	MTC	MTFC	DTM				
MT2K	K105/D6	MTC	MTFC	CM				
MT3	J107/G2	MTC	CM					
MT3	J107/G2	MTC	DTM					
MT3K	K104/D6	MTC	MTFC	DTM				
MT3K	K105/E6	MTC	MTFC	CM				
MT4	J107/G2	MTC	CM					
MT4	J107/G2	MTC	DTM					
MT5	K310/F6	DTM	MTFC	MTC				
MT5	K311/F8	CM	MTFC	MTC				
MT7	K608/C2	MTC	MTFC	DTM				
MT7	K608/C2	MTC	MTFC	CM				
MT8	K104/G6	MTC	DTM					
MT8	K105/G6	MTC	MTFC	CM				
MT8K	K104/A6	MTC	MTFC	DTM				
MT8K	K105/A6	MTC	MTFC	CM				
MT9	K307/H6	CM	MTC					
MT9K	K104/D6	MTC	MTFC	DTM				
MT9K	K105/E6	MTC	MTFC	CM				
MXT	K712/F5	MTFC	DTM					
M01	K708/C7	DTM	MTFC	MTC				
M01	K711/D6	CM	MTFC	MTC				
M7	K123/E4	MTC	MTFC	CM	ORMC			
M7	K123/E7	CM	IRMC					
M7	K207/G5	CM	OSC	OS				
M7	L123/E3	MTC	MTFC	AMRST				
M7	L123/E4	MTC	MTFC	CM	OSC	OS		
M7	L316/H2	AMRST	MTFC	CM	ORMC	OR		
M7	L317/H2	AMRST	MTFC	CM	IRMC	IR		
M7	P312/H1	AMRST	MTFC	CM	IRMC	IR		
M7	P312/H1	AMRST	MTFC	CM	ORMC	OR		

ISSUE	DWG SIZE	LEAD INDEX
5	C2	

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
N7	P313/G5	CM	OSC	OS				
N7*	L237/F9	AMRST	MTFC					
N	J107/B1	AMRST	MTC					
N	L107/D2	MTC	AMRST					
NARA	J107/A8	MTC	MTFC	CM				
ND	K208/A7	CM	OSC	OS				
NDI	K208/C2	MTFC	CM					
NDK	K208/D2	MTFC	CM					
NDK	L326/B7	AMRST	MTFC	CM				
NDK	P317/C8	CM	MTFC	AMRST				
NDT	K208/A3	MTC	CM					
NDT	K208/C1	MTC	MTFC	CM				
NE	K403/B7	CM	MTFC					
NE	P313/H5	CM	MTFC					
NG	K406/C1	MTFC	NGC					
NGCT0-3	K406/D1	MTFC	NGC					
NGCU0-9	K406/C1	MTFC	NGC					
NGC0-9	K406/C1	MTFC	NGC					
NGF	J124/A7	MTC	CM	NGC	JLK			
NGF	K406/E1	JLK	NGC	CM	MTC			
NGK	K406/D1	MTFC	NGC	CM				
NGT(A-H)	K414/C4	MTC	CM					
NG1	K406/C1	MTFC	NGC					
NM	K412/F5	MTC	MTFC	CM				
NN	K412/F5	MTC	MTFC	CM				
NOBT	K624/G5	MTC	MTFC	CM				
NR	K408/F0	MTFC	CM					
NS0,1	K203/A4,C4	MTFC	CM					
NT	K412/E5	MTC	MTFC	CM				
NT	K615/D7	MTC	LL					
NT	K615/G8	LL	LLC	DTM				
NT	K615/G8	LL	LLC	CM				
NTM	K614/B6	MTC	MTFC					
NTLM	K412/C4	MTC	CM					
NTR	K412/G5	MTC	CM					
NTT	K412/A5	MTC	MTFC	CM				
OA	K116/A5	MTC	MTFC	CM				
OA	L113/E7	AMRST	MTC					
OA	L312/B3	AMRST	MTFC	CM	IRMC	IR		
OA	L315/C6	MTC	AMRST					
OB	K116/C5	MTC	MTFC	CM				
OB	L113/E7	AMPST	MTC					
OB	L312/B3	AMRST	MTFC	CM	IRMC	IR		
OB	L315/C6	MTC	AMRST					
OA/OB	K406/D1	MTFC	NGC					
OBST	K624/H5	MTC	MTFC	CM				
OBS1	K624/B5	MTC	MTFC	DTM				
OCN	K118/G4	MTC	MTFC	CM				
OC1	J106/G4	MTC	MTFC	DTM				
OC1	K106/D2	PTC	MTFC	DTM				
OF	M410/B7	RSW	OI					
OF	M510/B7	RSW	OI					
OFK	N108/E7	NG	NGC	CM				
OFT	M410/A7	RSW	OI					
OFT	M510/B7	RSW	OI					
OGT	M009/G3	MTC	TT					
OGT	M609/F7	TT	MTC					
ON	L113/A2	IR	IRL	AMRST				
ON	J122/A1	AMRST	MTFC	TRC				
ON	J122/B1	ST	MTFC	TRC				
ON	J122/D1	LITC	MTFC	TRC				
ON	K707/G5	MTFC	TRC					
ON	L208/D4	IR	IRL					
ON	L309/F7	AMRST	MTFC					
ON	P108/G3	IRL	IR					
ON	P112/F1	AMRST	OR					
ON	P307/G6	AMRST	MTFC					
ONN	K316/B4	MTC	MTFC	CM				
ON0-9	P113/A0-G0	IRL	AMRST					
ON1	K205/F7	CM	OSC	OS				
OR	K118/A4	MTC	MTFC	CM				
OR	L121/A3	MTC	MTFC	CM				
OR	L121/A3	MTC	MTFC	AMRST				
OR	L311/G2	AMRST	MTFC	CM	ORMC	OR		
OR	P317/D1	P-REG	AMRST					
OR-DP	L322/B4	MTC	AMRST					
OR-MF	L322/B4	MTC	AMRST					

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
ORF	P317/F1	P-REG	AMRST					
OS	P317/E1	P-REG	AMRST					
OSA	L214/G8	AMRST	MTC					
OSC	K203/H3	MTC	MTFC	CM				
OSE	K205/C6	MTFC	CM					
OSF	P317/G1	P-REG	AMRST					
OSG0-11	K203/B3	MTC	MTFC	CM				
OSGA0-11	K204/A6	CM	OSC					
OSGB0-11	K204/H6	CM	OSC					
OSK	K203/G3	MTC	MTFC	CM				
OSM	L117/A4	CM	AMRST					
OSM	P114/B2	AMRST	CM	OSC	OS			
OS0-4	K205/B2	CM	MTFC	MTC				
OS0-4	K205/B8	CM	OSC	OS				
OTS0,1	K312/F2	MTC	DTM					
OTS0,1	K313/F2	MTC	CM					
OTT	K208/D2	MTC	MTFC	CM				
PBL	K808/H3	JLK	PRT					
PBN	N108/G7	NG	NGC	CM				
PBX	K409/H4	MTC	MTFC	CM				
PCI(DP)	L326/F2	AMRST	T-REG					
PCI(MF)	L326/G2	AMRST	T-REG					
PCK	K810/F4	MTC	MTFC	PRT				
PCN	J110/C0	MTFC	MTMG					
PCN	J114/C1	MTFC	MTMG					
PCS(DP)	L326/G2	AMRST	T-REG					
PCS(MF)	L326/G2	AMRST	T-REG					
PCO(DP)	L326/F2	AMRST	T-REG					
PD	K124/B3	MTC	MTFC	CM				
PD	L311/B2	AMRST	MTFC	CM	ORMC	OR		
PHC	K116/C5	MTC	MTFC	CM				
PK	K124/A3	MTC	MTFC	CM				
PK	L121/D3	MTC	MTFC	CM				
PK	L121/D3	MTC	MTFC	AMRST				
PK	L311/A2	AMRST	MTFC	CM	ORMC	OR		
PKU	M110/C5	RSW	IAO					
PKU	M410/C5	RSW	IT					
PKU	M510/C5	RSW	IMGT					
PL	L239/F7	AMRST	OS					
PL	P108/E5	OS	AMRST					
PLL	K514/F0	MTC	MTFC	CM				
PMO	N108/G7	NG	NGC	CM				
PRL	K810/A4	MTC	MTFC	PRT				
PS	K124/B3	MTC	MTFC	CM				
PS	L311/C2	AMRST	MTFC	CM	ORMC	OR		
PTK	K408/A3	MTFC	CM					
PTP	J109/D1	PRT	MTFC	MTC				
PTP	J113/D1	PRT	MTFC	MTC				
PTR	K810/E4	MTC	MTFC	PRT				
PTS	J109/F2	MTFC	MTC					
PTS	J113/F2	MTFC	MTC					
PTT0-2	J109/F2-F4	MTFC	MTC					
PTT0-2	J113/F2-F4	MTFC	MTC					
PU	M110/C3	PRTD	IAO					
PU	M410/D3	PRTD	IT					
PU	M510/D3	PRTD	IMGT					
R	J103/D2	MISC	MTC					
R	K609/A1	TL	TLC	DTM				
R	K609/A1	TL	TLC	CM				
R	K615/D7	MTC	LL					
R	K620/C3	MTC	MTC	LL	TL	OR		
R	K621/B2	MTC	MTC	LL	TL	TRK		
R	L114/B3	AMRST	IRL	IR	SR			
R	L114/B3	AMRST	IRL	IR				
R	L224/B5	AMRST	MTC	MTC	LL	TL	OR	TTR
R	L224/B5	AMRST	MTC	MDF	LL	TL	OR	TTR
R	L224/H3	IR	IRL	AMRST				
R	L228/D4	IR	IRL	AMRST				
R	L230/B1	OS	AMRST					
R	L231/B4	OS	AMRST	L232/B0	SR			
R	L239/B5	TL	OGT	OSL	OS			
R	M608/B0	TT	MTC	MDF	LL	TL	OGT	MDF
R	M108/B0	TT	MTC	MDF	M110/D3			
R	M108/B0	TT	MTC	MDF	M109/C0			
R	M109/C0	LL	TL	IAO	TL	LL	MDF	TT
R	M110/D3	LL	TL	IAO	RSW			
R	M208/B0	TT	MTC	MDF	M209/C0			

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
R	M209/C0	LL	TL	OGT	MDF	IT	IT SW	OT&P
R	M210/B3	TT	MTC	MDF	LL	TL	OGT	MDF
R	M210/F3	TT	MDF	LL	TL	OGT	MDF	
R	M211/B9	MW SUP	TTL	MDF	LL	TL	IT	MDF
R	M211/D2	IT	IRL					
R	M212/A2	M-AMPL	T-TERM					
R	M212/F2	MW SUP	TTL	T-TERM				
R	M308/B0	TT	MTC	MDF	LL	TL	OGT	MDF
R	M309/C0	IT	MDF	IT	TL	LL	ITTL	
R	M309/E2	IT	IRL					
R	M408/B1	MDF	IT	M410/E3	RSW			
R	M408/B1	MDF	IT	TL	LL	MDF	TT	
R	M408/D3	IT	IRL					
R	M408/F2	MISC	TT	M409/G0	JLK			
R	M408/F2	MISC	TT	M409/G0	TKL			
R	M508/B8	IMGT	M510/E4					
R	M508/C0	TT	MTC	MDF	M509/C0			
R	M509/C0	LL	TL	IMGT	TL	LL	TT	
R	M510/C5	RSW	IMGT	M508/B9				
R	M608/C0	TT	MTC	MDF	LL	TL	OGT	MDF
R	M708/B0	MDF	ITT	LL	TL	OGT	MDF	
R	M708/D2	ITT	IRL					
R	M708/F2	MISC	TT	M709/D1				
R	M709/D1	TT	N010/D9					
R	M709/D4	TT	JLK					
R	N008/C0	MTC	LL	TL	MTC	VM TST		
R	N010/C1	MISC	TKL	VM TST				
R	N010/E9	TKL	M308/B0					
R	N010/E9	TKL	M008/B0					
R	N010/E9	TKL	M108/B0					
R	N010/E9	TKL	M208/B0					
R	P207/C0	OGT	OSL	OS	AMRST			
R	P207/E0	IT	IRL	IR	AMRST			
R	P207/F1	LL	TL	OR	AMRST			
R	P207/G4	AMRST	TTSTR					
R	P208/B0	IT	IRL	IRMF	SR			
R	P208/C1	IR	AMRST	OS				
R	P208/F0	OGT	OSL	OS				
R-	N009/B7	VM TST	TN GN					
R-	N009/B7	VM TST	SA TM					
RA	K607/B1	MTC	MTFC	CM				
RA	K607/G1	MTC	MTFC	DTM				
RA	L326/H8	AMRST	CM					
RA	M110/C5	RSW	IAO					
RA	M410/C5	RSW	IT					
RA	M510/C5	RSW	IMGT					
RA	P317/C4	AMRST	CM					
RB	M110/C5	RSW	IAO					
RB	M410/C4	RSW	IT					
RB	M510/C4	RSW	IMGT					
RBT	K607/D1	MTC	MTFC	CM				
RBT	L319/C6	AMRST	CM					
RBT1	K607/E1	MTC	MTFC	CM				
RB0	L112/E1	IR	IRL					
RB0-9	L112/E3	IRL	AMRST					
RC	J110/D5	MTFC	RCD					
RC	J114/D5	MTFC	RCD					
RC	K314/C6	CM	TLC	TL	OGT			
RC	K611/C3	DTM	TLC	TL	OR			
RC	K623/B3	MTC	MTFC	CM				
RC	M110/D7	IAO	TL	TLC	CM			
RC	M410/F6	IT	TL	TLC	CM			
RC	M510/F6	IMGT	TL	TLC	CM			
RC-	J110/D7,D8	MTFC	RCD					
RC-	J114/D7,D8	MTFC	RCD					
RCCK	K808/E2	MTFC	PRT					
RCK2	K623/D4	MTFC	CM					
RCK3	K623/D4	MTFC	CM					
RCT	K409/F4	MTC	MTFC	CM				
RCT	N113/A3	MTC	CM					
RCT/T-	N113/B3	MTC	MTFC					
RCT/U-	N113/B3	MTC	MTFC					
RCT1-15	K409/C4-E4	MTC	MTFC	CM				
RCT1-15	N113/C3	MTC	MTFC	CM				
RCY	K607/A1	MTC	MTFC	CM				
RCY	K607/F1	MTC	MTFC	DTM				
RC0	J110/D6	MTFC	RCD					

LEAD INDEX

DWG SIZE	ISSUE
C2	5

BELL LABORATORIES SFD-10-01 A805

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
RC0	J114/D6	MTFC	RCD					
RC01-15	N108/D7	NG	NGC	CM				
RC1	J110/F6	RCD	TV	MTFC				
RC1	J114/F6	RCD	TV	MTFC				
REC	L325/A8	AMRST	MTC					
REP	J107/A1	AMRST	MTC					
REP	L325/B8	AMRST	MTC					
RF	K609/F1	TL	TLC	DTM	MTFC			
RF	K609/F1	TL	TLC	CM	MTFC			
RG	L326/D5	AMRST	OR	MTFC				
RG	L326/E5	AMRST	IR	MTFC				
RG	N010/F6	VM TST	TKL					
RG	P317/E5	AMRST	OR	AMRST	MTFC			
RG	P317/F5	AMRST	IR	AMRST	MTFC			
RI	K413/E4	MTC	MTFC	CM				
RING G	K620/E9	DTM	PRTD					
RING G	K621/D9	CM	PRTD					
RING G	K621/E9	CM	JLK					
RING G	N010/G7	TKL	PRTD					
RK	K609/D1	TL	TLC	CM	MTFC			
RK	K609/D1	TL	TLC	DTM	MTFC			
RK1-3	K611/C3,D4	MTFC	DTM					
RK2,3	K505/B2,C2	CM	MTFC					
RL	J103/E0	STS	ST	MTC				
RL	K605/H2	MTFC	CM					
RL	K713/F3	MTFC	CM					
RL	L319/A7	CM	ORMC	OR				
RLK	K810/A4	MTC	MTFC	PRT				
RLT	K713/F3	MTC	CM	AMRST				
RLT	L319/A6	AMRST	CM					
RM	M212/E2	M-AMPL	T-TERM					
RMA	J110/G7	TV	MTFC					
RMA	J114/G7	TV	MTFC					
RMG	K408/A0	MTFC	CM					
ROG	K624/E5	MTC	MTFC	CM				
RON	J108/C7	DTM	MTFC					
RON	J108/F1	CM	MTFC					
RON	J112/D7	DTM	MTFC					
RON	J112/F1	CM	MTFC					
ROT	K624/D5	MTC	MTFC	CM				
RP	K125/F5	MTC	MTFC	CM				
RP	L121/D3	MTC	MTFC	CM				
RP	L121/D3	MTC	MTFC	AMRST				
RP	L311/D2	AMRST	MTFC	CM	ORMC	OR		
RP0-9	L112/A3	IRL	AMRST					
RSK	K622/G3	MTC	MTFC	CM				
RS0-9	K622/A3-G3	MTC	MTFC	CM				
RT	M110/C3	RSW	IAO					
RT	M410/C3	RSW	IT					
RT	M510/C3	RSW	IMGT					
RTST	L319/D6	AMRST	CM					
RTOS	K707/G5	MTFC	TRC					
R0	K118/B4	MTC	MTFC	CM				
R0	K624/D8	CM	OSC	OS				
R0	L239/B4	AMRST	TL					
R0	L312/E3	AMRST	MTFC	CM	IRMC	IR		
R0	M008/E9	OGT	TL	OGT	M009/C1	TT		
R0	M308/E2	TT	TL	OGT				
R0	M608/D8	OGT	TL	M609/B1				
R0	M708/C8	OGT	TL	M709/B1				
R0*	K605/G2	MTFC	CM					
R0*	K624/D5	MTFC	CM					
R0S	K707/D5	MTFC	TRC					
R1	L114/B6	SR	IR					
R1	L228/D2	IR	SR					
R1	M308/F2	TT	TL	OGT				
R1	N010/E1	MISC	TKL					
R1	N010/E6	VM TST	TKL					
R1,2	M210/C1,D1	JLK	TT					
R1,2	P208/B3	SR	IR					
S	K206/B1	OSC	CM					
S	K206/B6	AMRST	OS	OSC	MTFC			
S	K206/B8	OSC	MTFC					
S	K614/A1	TT	MTC					
S	K615/D7	MTC	LL					
S	K616/A4	LL	JGF	TL	OR			
S	K617/A4	LL	TL	TRK				

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
S	K617/A4	LL	TL	MTC				
S	K618/B4	LL	JGF	TL	OR			
S	K619/B4	LL	JGF	TL	OGT			
S	L326/G5	AMRST	OS	MTFC				
S	M008/C3	TT	MTC	MDF	LL	TL	OGT	
S	M108/C3	TT	MTC	MDF	LL	TL	IAO	
S	M108/C9	IAO	M109/D0	TL	LL	MDF	TT	
S	M208/C3	TT	MTC	MDF	LL	TL	OGIT	
S	M209/F4	IT SW	TP					
S	M210/C3	TT	MTC	MDF	LL	TL	OGT	
S	M210/G3	TT	MDF	LL	TL	OGT		
S	M211/C4	IT	TL	LL	MDF	TTL		
S	M308/C2	TT	MTC	MDF	LL	TL	OGT	
S	M309/D4	IT	TL	LL	ITTL			
S	M408/C5	IT	TL	LL	MDF			
S	M408/F2	MISC	TT					
S	M508/C3	TT	MTC	MDF	M509/C0			
S	M509/C0	LL	TL	IMGT	TL	LL	TT	
S	M608/C3	TT	MTC	MDF	LL	TL	OGT	
S	M708/C4	ITT	LL	TL	OGT			
S	M708/F2	MISC	TT					
S	N008/C2	LL	TL	MTC				
S	P317/H5	AMRST	OS	AMRST	MTFC			
S-	K411/A1	LL	MDF	NG	NGC	CM	MTFC	MTC
SAM	K206/B3	OSC	CM					
SB	K607/B1	MTC	MTFC	CM				
SB	L117/C2	OS	AMRST					
SB	P114/D8	AMRST	OS					
SBM	K206/B3	OSC	CM					
SBT	K607/B1	MTC	MTFC	CM				
SC	K205/E8	OSL	OGT					
SCBA0-3	K203/B9	CM	JLK					
SCBB0-3	K203/C9	CM	JLK					
SCK	K124/C3	MTC	MTFC	CM				
SCK	L121/E3	MTC	MTFC	AMRST				
SCK	L121/E3	MTC	MTFC	CM				
SCK	L311/C2	AMRST	MTFC	CM	ORMC	OR		
SCM	K206/B2	OSC	CM					
SCN	K124/D3	MTC	MTFC	CM				
SCT	L309/C3	MTFC	AMRST	CM				
SCT	P306/C3	MTFC	AMRST	CM				
SD	K807/D5	PRT	MTFC	MTC				
SDT	K128/D3	MTFC	DTM					
SDT	K128/D3	MTFC	CM					
SEF	K609/G1	TL	TLC	CM	MTFC			
SEF	K609/G1	TL	TLC	DTM	MTFC			
SG	K206/B8	OSC	MTFC					
SG	L117/B2	OS	AMRST					
SIA,B	K203/D3,E3	MTC	MTFC	CM				
SKT	J119/F4	MTC	MTFC					
SL	K616/F8	DTM	MTFC	MTC				
SL	K617/F5	CM	MTFC	MTC				
SLCK	K411/C6	CM	MTFC	MTC				
SLK	K205/E7	CM	TLC	OSL				
SLK1,2	K206/F8	CM	MTFC					
SM	L113/C2	IR	IRL					
SM	M209/D5	IT SW	OT&P					
SNG	K406/A1	MTFC	CM					
SNK	K309/G5	CM	MTFC					
SOG	K117/C2	MTFC	CM					
SON	K203/C4	MTFC	CM					
SON	P112/A2	AMRST	CM					
SP	K614/F6	MTC	MTFC					
SP	P108/H5	IR	AMRST					
SPC	K614/E6	MTC	MTFC					
SPE	L240/C5	AMRST	OS					
SPE	P212/D6	OS	AMRST					
SPE	P212/E6	OS	AMRST					
SPL	K116/A5	MTC	MTFC	CM				
SPL	L313/A2	AMRST	MTFC	CM	IRMC	IR		
SPL	L315/C2	MTC	AMRST					
SPL1	L315/C2	MTC	AMRST					
SRK	K623/E4	MTFC	CM					
SRT	J106/C9	MTC	MTFC					
SRT	K206/C7	INGS	OSC	MTFC	MTC			
SRT	K624/F5	MTFC	OSC	INS				
SRT	L326/F2	AMRST	MTFC					

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
SRT1	K624/F5	MTC	MTFC					
SSA,B	K203/F3,G3	MTC	MTFC	CM				
SS0-9	K205/D7	CM	TLC	OSL				
ST	J103/C0	STS	ST	MTC				
ST	K306/B5	CM	PCMB					
ST	K306/B5	DTM	PCMB					
ST	K307/A6	CM	PCMB					
ST	K307/A6	DTM	PCMB					
ST	K511/G6,G8	PCMB	DTM					
ST	L112/C3	IRL	AMRST					
ST	M212/G2	MW SUP	TTL					
ST	M410/A7	RSW	OI					
ST	M510/A7	RSW	OI					
ST	P111/A7-E7	AMRST	CM					
ST	P111/F7,G7	AMRST	DTM					
ST-	K307/E5	CM	TL					
ST-	K407/G2-G8	PCMB	CM					
ST-	K511/G2-G8	PCMB	CM					
ST-	N009/B7	VM TST	TN GN					
ST-	N009/B7	VM TST	5A TM					
STG	L109/A7	AMRST	MTC					
STG	M009/F3	MTC	TT					
STG	M109/F3	MTC	TT					
STG	M208/E5	MTC	TT					
STG	M308/G2	TT	MTC					
STG	M408/H7	TT	MTC					
STG	M509/E1	MTC	TT					
STG	M609/E7	TT	MTC					
STG	M709/E3	TT	MTC					
STP1,2	K604/F1,G1	MTC	MTFC	DTM				
STP1,2	K605/F2,G2	MTC	MTFC	CM				
STR	J122/A1	AMRST	MTFC	TRC				
STR	J122/B1	ST	MTFC	TRC				
STR	J122/C1	LITC	MTFC	TRC				
STR	K707/A2	TRC	MTFC					
STR	P306/E8	AMRST	MTFC					
STRA	J122/D6	TRC	MTFC	LITC				
STR1	J122/B5	LITC	MTFC					
STR2	J122/B5	MTFC	LITC					
STT	L107/A2	MTC	AMRST					
ST0	K307/E5	CM	PCMB					
ST0	K407/G1	PCMB	CM					
ST0	K511/G1,G4	PCMB	CM					
ST0	K511/G6,G8	PCMB	DTM					
ST0-29	K306/G4-G7	PCMB	DTM					
ST0-59	K510/A6-D6	CM	PCMB					
ST0-59	K510/E6-H6	DTM	PCMB					
S0	M209/E5	IT SW	OT&P					
S0-4	K206/B0	OSC	CM					
S0-8	J121/E4	MTFC	TRC					
S0-8	K707/E5,F5	MTC	TRC					
S0-9	M309/E6	MDF	NG	NGC	CM			
S1	M008/E7	TL	OGT					
S1	M108/D9	IAO	M109/D0	TL				
S1	M208/D7	TL	OGIT					
S1	M309/E7	MDF	ITTL					
S1	M608/D3	TT	MTC					
S1,2	M210/D1	JLK	TT					
T	[illegible]93/D2	MISC	MTC					
T	K206/F3	JLK	OS					
T	K615/D7	MTC	LL					
T	K620/C3	MTC	MTC	LL	TL	OR		
T	K621/B2	MTC	MTC	LL	TL	TRK		
T	L114/A3	AMRST	IRL	IR				
T	L114/A3	AMRST	IRL	IR	SR			
T	L224/A5	AMRST	MTC	MDF	LL	TL	OR	TTR
T	L224/A5	AMRST	MTC	MTC	LL	TL	OR	TTR
T	L224/G3	IR	IRL	AMRST				
T	L228/C4	IR	IRL	AMRST				
T	L230/A1	OS	AMRST					
T	L231/C4	OS	AMRST	L232/A0	SR			
T	L239/A5	TL	OGT	OSL	OS			
T	M008/A0	TT	MTC	MDF	LL	TL	OGT	MDF
T	M108/A0	TT	MTC	MDF	M109/A0			
T	M108/A0	TT	MTC	MDF	M110/D3			
T	M109/A0	LL	TL	IAO	TL	LL	MDF	TT
T	M110/D3	LL	TL	IAO	RSW			

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
T	M208/A0	TT	MTC	MDF	M209/B0			
T	M209/B0	LL	TL	OGIT	MDF	IT	IT SW	OT&P
T	M210/A3	TT	MTC	MDF	LL	TL	OGT	MDF
T	M210/E3	TT	MDF	LL	TL	OGT	MDF	
T	M211/A9	MW SUP	TTL	MDF	LL	TL	IT	MDF
T	M211/D2	IT	IRL					
T	M212/A2	M-AMPL	T-TERM					
T	M212/F2	MW SUP	TTL	T-TERM				
T	M308/A0	TT	MTC	MDF	LL	TL	OGT	MDF
T	M309/B0	IT	MDF	IT	TL	LL	ITTL	
T	M309/E1	IT	IRL					
T	M408/A1	MDF	IT	TL	LL	MDF	TT	
T	M408/A1	MDF	IT	M410/E3	RSW			
T	M408/D2	MISC	TT	M409/F0	TKL			
T	M408/D2	MISC	TT	M409/F0	JLK			
T	M408/D2	IT	IRL					
T	M508/B0	TT	MTC	MDF	M509/B0			
T	M508/B8	IMGT	M510/E4					
T	M509/B0	LL	TL	IMGT	TL	LL	TT	
T	M510/C4	RSW	IMGT	M508/B9				
T	M608/B0	TT	MTC	MDF	LL	TL	OGT	MDF
T	M708/A0	MDF	ITT	LL	TL	OGT	MDF	
T	M708/D2	ITT	IRL					
T	M708/D2	MISC	TT	M709/D1				
T	M709/C1	TT	N010/D9					
T	M709/D4	TT	JLK					
T	N008/A0	MTC	LL	TL	MTC	VM TST		
T	N010/B1	MISC	TKL	VM TST				
T	N010/D9	TKL	M208/A0					
T	N010/D9	TKL	M108/A0					
T	N010/D9	TKL	M308/A0					
T	N010/D9	TKL	M008/A0					
T	P207/D0	OGT	OSL	OS	AMRST			
T	P207/E0	IT	IRL	IR	AMRST			
T	P207/G1	LL	TL	OR	AMRST			
T	P207/G4	AMRST	TTSTR					
T	P208/A0	IT	IRL	IRMF	SR			
T	P208/C1	IR	AMRST	OS				
T	P208/F0	OGT	OSL	OS				
T-	N009/A7	VM TST	TN GN					
T-	N009/A7	VM TST	SA TM					
TA	K115/C9	MISC	CM					
TAN	M609/G7	TT	MTC					
TAN	M709/F3	TT	MTC					
TAN3	M608/D3	TT	M401/D1					
TAN3	M709/G3	TT	MTC					
TB	K607/C1	MTC	MTFC	CM				
TB	K607/H1	MTC	MTFC	DTM				
TBI	K413/H4	MTC	MTFC	CM				
TBK	K312/H6	MTFC	DTM	TLC	TL			
TBK	K313/G6	CM	TLC	TL				
TBK	K313/G6	CM	MTFC					
TBS0-3	K414/A4	MTC	MTFC	CM	NGC	NG		
TBT	K607/C1	MTC	MTFC	CM				
TBT	K607/G1	MTC	MTFC	DTM				
TB0	K106/A3	MTFC	DTM					
TB0	K312/G6	DTM	TLC	TL				
TB0	K312/G7	MTFC	TL					
TB0-9	K311/A9	CM	MTFC					
TB0-9	K313/G6	CM	TLC	TL				
TB00-09	K414/E5	NG	MTC					
TC	K314/F1	MTFC	CM	TLC	TL	OGT		
TC	M410/C4	RSW	IT	TL	TLC	CM		
TC	M510/C5	RSW	IMGT	TL	TLC	CM		
TCA,B	K116/G5	MTC	MTFC	CM				
TCA,B	L312/F3	AMRST	MTFC	CM	IRMC	IR		
TCA,B	L315/C4	MTC	AMRST					
TCHK	K604/H2	MTC	MTFC	DTM				
TCHK	K605/H2	MTC	MTFC	CM				
TCH0-9	K608/B2	MTC	MTFC	CM				
TCH0-9	K608/B2	MTC	MTFC	DTM				
TCK1	K623/C4	MTFC	CM					
TCL0-10	L113/D7	AMRST	MTC					
TC1	K106/F2	MTC	MTFC	DTM				
TDCT	K708/C2	DTM	MTFC	MTC				
TDCT	K710/D3	CM	MTFC	MTC				
TER	K117/E2	MTFC	CM					

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
TF	K313/F9	TL	IAO					
TF	L113/C2	IR	IRL					
TF0,1,2,4,7	K127/B3-E3	MTC	MTFC	CM				
TF0,1,2,4,7	K307/E6	CM	MTFC	MTC				
TF0,1,2,4,7	P309/B2	AMRST	MTFC	CM	IRMC	IR		
TF0,1,2,4,7	L314/D2	AMRST	MTFC	CM	IRMC	IR		
TF0-9	L113/G2	IR	IRL					
TG-	K313/D6-F6	CM	TLC	TL				
TGT	K711/D6	CM	MTFC					
TG0	K106/D3	MTFC	DTM					
TG0-19	K311/A9	CM	MTFC					
TG0-5	K312/F6	DTM	TLC					
TG1	K106/B3	MTFC	DTM					
THC	K116/B5	MTC	MTFC	CM				
THGT0-9	K112/B3	MTC	MTFC	DTM				
TI	J119/G4	MTC	MTFC	PRF				
TIN	K316/B5	MTFC	CM					
TK	K604/G2	MTFC	DTM					
TK	K605/G2	MTFC	CM					
TKT	J106/D9	MTC	MTFC					
TLF	K306/A0	JLK	TLC	DTM				
TLH	K616/F7	DTM	MTFC	MTC				
TLH	K617/F7	CM	MTFC	MTC				
TM	J117/A5	PRT	MTFC					
TM	J117/D5	CM	MTFC					
TM	J117/G5	DTM	MTFC	PRF				
TM	J117/H5	MTC	MTFC					
TM	K115/A0	MTC	MTFC	CM				
TM	K810/F4	MTC	MTFC	PRT				
TM	M212/E2	M-AMPL	T-TERM					
TM	M608/D8	OGT	CM					
TM	M708/D8	OGT	CM					
TMB	K407/G1	PCMB	CM					
TMB	K511/G2,G4	PCMB	CM					
TN	M410/C5	RSW	IT					
TN	M508/C8	IMGT	M510/E4					
TN	M510/C5	RSW	IMGT	M508/C8				
TNGA	K414/B4	MTC	CM					
TOG	K117/B2	MTFC	CM					
TOS0-4	K205/B6,C6	MTC	MTFC	CM				
TP	K125/G5	MTC	MTFC	CM				
TP	K314/B6	CM	TLC	TL	OGT			
TP	L121/D3	MTC	MTFC	CM				
TP	L121/D3	MTC	MTFC	AMRST				
TP	L311/E2	AMRST	MTFC	CM	ORMC	OR		
TP	M410/E6	IT	TL	TLC	CM			
TP	M510/D6	IMGT	TL	TLC	CM			
TP	K623/A3	MTC	MTFC	CM				
TPR	J110/C1	MTFC	MTMG					
TPR	J114/C1	MTFC	MTMG					
TRA	K317/E3	AMRST	MTFC	TLC	TL			
TRB	K707/D7	CM	MTFC					
TRB	K708/C8	DTM	MTFC					
TRB	K808/B5	MTFC	PRT					
TRB	L109/D7	AMRST	MTFC					
TRB	P317/D8	AMRST	MTFC					
TRB1	K707/D7	MTFC	JLK					
TRB1	K708/D6	MTFC	JLK					
TRB1	K808/B1	JLK	MTFC					
TRB1	L125/A6	JLK	MTFC					
TRB1	P307/F3	AMRST	MTFC	JLK				
TRC	J122/B6	MTFC	TRC					
TRC	K707/A2	TRC	MTFC					
TRC	L326/C7	AMRST	MTFC					
TRC	P316/E5	AMRST	MTFC					
TRK	K107/E4	MTC	MTFC	DTM				
TRK	K117/E1	MTC	MTFC	CM				
TRK	K712/D4	MTC	MTFC	DTM				
TRK	K808/C5	MTFC	PRT					
TRL	K107/B4	MTC	MTFC	DTM				
TRL	K712/A4	MTC	MTFC	DTM				
TRL	K713/B3	MTC	MTFC	CM				
TRN	L315/C4	MTC	AMRST					
TRN	L322/B3	MTC	AMRST					
TRR	K708/C4	DTM	MTFC	MTC				
TRR	K711/D5	CM	MTFC	MTC				
TRS	K107/D4	MTC	MTFC	DTM				

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION					
TRS	K117/G1	MTC	MTFC	CM				
TRS	K712/C4	MTC	MTFC	DTM				
TRS	K808/B1	MTC	MTFC	PRT				
TRST	J108/B1	AMRST	MTFC	CM				
TRST	J108/B1	AMRST	MTFC	DTM				
TRST	J109/C1	PRT	MTFC					
TRST	J109/C8	MTFC	LITC					
TRST	J110/C2,C3	MTFC	MTMG					
TRST	J110/D4	MTFC	RCD					
TRST	J111/D2	TV	MTFC					
TRST	J112/C1	AMRST	MTFC	DTM				
TRST	J112/C1	AMRST	MTFC	CM				
TRST	J112/D4	MTFC	LITC					
TRST	J113/C1	PRT	MTFC					
TRST	J114/C2	MTFC	MTMG					
TRST	J114/D4	MTFC	RCD					
TRST	J115/D1	TV	MTFC					
TRST	K707/B7	CM	MTFC					
TRST	K708/C9	DTM	MTFC					
TRST	L309/B7	CM	MTFC	AMRST				
TRST	P306/B8	CM	MTFC	AMRST				
TRST-	J110/D7,D8	MTFC	RCD					
TRST-	J114/D7,D8	MTFC	RCD					
TRST0	J110/D5	MTFC	RCD					
TRST0	J114/D5	MTFC	RCD					
TRT	K115/C9	MISC	CM					
TRT	K620/F4	MTC	MTFC	DTM				
TRT	K621/D4	MTC	MTFC	CM				
TR1	K708/C0	DTM	MTFC	MTC				
TR1	K711/D4	CM	MTFC	MTC				
TR2	K107/D4	MTC	MTFC	DTM				
TR2	K117/F1	MTC	MTFC	CM				
TR2	K712/4C	MTC	MTFC	DTM				
TR2	K808/A1	MTC	MTFC	PRT				
TS	J119/A4	MTC	MTFC					
TS	J119/C4	TT-REG	MTFC					
TS	J119/D4	LITC	MTFC					
TSE	K310/F6	DTM	MTFC					
TSE	K311/B9	CM	MTFC					
TSE1,2	K310/F6,G6	DTM	MTFC	MTC				
TSE1,2	K311/G8	CM	MTFC	MTC				
TSK	K312/B5	MTC	MTFC	TLC	TL			
TSK	K313/B5	MTC	MTFC	TLC	TL			
TST	K312/B5	MTC	MTFC	TLC	TL			
TST	K313/B5	MTC	MTFC	TLC	TL			
TST	L313/D2	AMRST	MTFC	CM	IRMC	IR		
TST	M410/G7	IR	IRMC	CM	MTFC			
TST	M709/E6	CM	IRMC	IR				
TST	M709/F6	CM	MTFC					
TSX	K317/G6	CM	TLC	TL				
TS0-19	K311/B9-E9	CM	MTFC					
TS0-9	K310/A6-D6	DTM	MTFC					
TT	K208/C7	CM	TLC	TL	TRK			
TTC	K208/E9	TL	TRK					
TTC	K314/F1	MTC	MTFC	CM				
TTC	K623/E3	MTC	MTFC	CM				
TTC1	K314/G1	MTC	MTFC	CM				
TTC1	K623/F3	MTC	MTFC	CM				
TTG	K208/D5	CM	MTFC					
TTK	P207/G0	MTFC	CM					
TTK	K208/D5	CM	MTFC					
TTK	K208/G9	MTC	TL					
TTL	J111/F4	MTFC	MTC					
TTL	J115/G4	MTFC	MTC					
TTM	K208/D7	MTFC	TLC	TL				
TTP	J108/H8	MTC	J111/C0	MTFC				
TTP	J112/H9	MTC	J115/C1	MTFC				
TTT	K620/D4	MTC	MTFC	DTM				
TTT	K621/C4	MTC	MTFC	CM				
TT0-19	K313/B2-D2	MTC	CM					
TT0-9	K312/B2-D2	MTC	DTM					
TVA-	J111/D2	TV	MTFC					
TVA-	J115/E1	TV	MTFC					
TVB-	J111/E2	TV	MTFC					
TVB-	J115/E1	TV	MTFC					
TVFT0-4	K512/A4	MTC	MTFC	DTM				
TVGT0-11	K110/C5	MTC	MTFC	DTM				

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DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION			
TVS	J111/F4	MTFC	MTC			
TVS	J115/G4	MTFC	MTC			
TVT-	J111/F5	MTFC	MTC			
TVT-	J115/G6	MTFC	MTC			
TVTA	J111/E2	TV	MTFC			
TVTA	J115/F1	TV	MTFC			
TVT0	J111/F4	MTFC	MTC			
TVT0	J115/G5	MTFC	MTC			
T0,1,2,4,7	L229/A8-C8	AMRST	MFCS			
T0	L239/A4	AMRST	TL			
T0	M008/E9	OGT	TL	OGT	M009/A1	TT
T0	M308/E2	TT	TL	OGT		
T0	M608/D8	OGT	TL	M609/B1		
T0	M708/C8	OGT	TL	M709/B1		
T1	L114/A6	SR	IR			
T1	L228/C2	IR	SR			
T1	M210/C1	JLK	TT			
T1	M308/F2	TT	TL	OGT		
T1	N010/D1	MISC	TKL			
T1	N010/D6	VM TST	TKL			
T1	P208/A3	SR	IR			
T10	L229/C8	AMRST	MFCS			
T2	M210/D1	JLK	TT			
T2	P208/B3	SR	IR			
VFT0-4	K508/D4	MTC	MTFC	CM		
VFT0-4	K512/A5,D5	MTFC	DTM	LLC	LL	
VFT0-4	N109/G9	MTC	N110/F0	MTFC	CM	
VFT0-4	N110/F0	MTC	MTFC			
VF0-4	K113/E5	MTC	MTFC	CM	OSC	OS
VF0-4	L120/C2	MTC	MTFC	CM	OSC	OS
VF0-4	L120/C2	MTC	MTFC	AMRST		
VF0-4	L310/E2	AMRST	MTFC	CM	ORMC	OR
VF0-4	N108/E7	NG	NGC	CM		
VF0-4	P308/E2	AMRST	MTFC	CM	ORMC	OR
VF'0-4	K113/F6	MTFC	CM			
VF'0-4	L120/C3	MTFC	CM			
VF'0-4	L310/F3	MTFC	CM			
VG-	K111/A6	MTC	MTFC	CM	OSC	OS
VG-	L120/D2	MTC	MTFC	AMRST		
VG-	L120/D2	MTC	MTFC	CM	OSC	OS
VG-	L310/E2	AMRST	MTFC	CM	ORMC	OR
VG-	P308/D2	AMRST	MTFC	CM	ORMC	OR
VG-'	L310/E3	MTFC	CM			
VG'-	K111/B7	MTFC	CM			
VG'-	L120/E3	MTFC	CM			
VGA	K110/H5	MTC	MTFC	DTM		
VGB0-11	K513/F7	DTM	LLC	LL		
VGB0-11	K516/H6	DTM	LLC	LL		
VGB0-11	K517/G7	DTM	LLC	LL		
VGB0-11	K518/G6	CM	LLC	LL		
VGB0-11	K519/G6	CM	LLC	LL		
VGB0-11	N111/G6	CM	LLC	LL		
VGB0-11	N112/H6	CM	LLC	LL		
VGT/T-	N110/D2	MTFC	CM			
VGT/U-	N110/D2	MTFC	CM			
VGT0-11	K110/A6-E6	MTFC	DTM			
VGT0-11	K507/C4	MTC	MTFC	CM		
VGT0-11	N109/D9	MTC	N110/D0	MTFC	CM	
VGT0-11	N110/D0,E0	MTC	MTFC			
VG00-11	N108/C7	NG	NGC	CM		
VTK1	K110/G6	MTFC	DTM			
VTK1	K507/E6	CM	MTFC			
VTK1	N110/G7	CM	MTFC			
V0-4	K516/B6	DTM	LLC	LL		
V0-4	K517/B7	DTM	LLC	LL		
V0-4	K518/B6	CM	LLC	LL		
V0-4	K519/B6	CM	LLC	LL		
V0-4	N111/B6	CM	LLC	LL		
V0-4	N112/B6	CM	LLC	LL		
W	K406/E2	NGC	CM			
WA	K206/F4	OS	OSGR			
WF	N108/D3	CM	NGC	NG		
WG	N108/C3	CM	NGC	NG		
WL	N108/B3	CM	NGC	NG		
WSD	J123/C1	DTM	MTC			
WT	K129/E1	MTFC	CM			
WT	K129/E1	MTFC	DTM			

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION			
XAB	K605/G2	MTFC	CM			
XAN	K713/D3	MTFC	CM			
XBT	K107/B5	MTFC	DTM			
XBT	K119/C1	CM	MTFC			
XBT	K712/E5	MTFC	DTM			
XBT	K713/C3	MTFC	CM			
XCH	K618/H1	DTM	MTFC			
XCH	K619/H5	CM	MTFC			
XCKR	K117/F2	MTFC	CM			
XCL	K106/G3	MTFC	DTM			
XCLC	K118/F5	MTFC	CM			
XCS	K518/B3	MTFC	CM			
XCS	N111/B3	MTFC	CM			
XF	K609/F5	DTM	MTFC			
XF	K609/F5	CM	MTFC			
XFT	K305/C1-C9	CM	TLC	TL		
XFT	K305/E0	CM	MTFC	MTC		
XFUT	K408/B6	MTFC	CM			
XHG	K512/G5	MTFC	DTM			
XLG	K512/F5	MTFC	DTM			
XLG	K515/C7	CM	MTFC			
XLR	K118/E5	MTFC	CM			
XLR	K609/E5	CM	MTFC			
XLR	K609/E5	DTM	MTFC			
XLO	K520/E0	MTFC	CM			
XMR	K713/D3	MTFC	CM			
XN	K405/G9	CM	MTFC			
XOB	K119/C1	CM	MTFC			
XPT	K713/E3	MTFC	CM			
XRL	K713/E3	MTFC	CM			
XRS1	K408/C6	MTFC	CM			
XRS1	N113/H6	MTFC	CM			
XS	K206/B2	OSC	CM			
XS	K206/D8	CM	MTFC			
XSA	K206/B2	OSC	CM			
XSA	K206/D8	CM	MTFC			
XSL	K616/F8	DTM	MTFC	MTC		
XT	K118/E5	MTFC	CM			
XTB	K311/H8	CM	MTFC			
XTG	K313/H6	CM	MTFC			
XTG1	K312/H6	DTM	MTFC			
XTG1	K313/H6	CM	MTFC			
XTRK	K107/F5	MTFC	DTM			
XTRK	K117/F2	MTFC	CM			
XTRK	K712/F5	MTFC	DTM			
XTRL	K107/C5	MTFC	DTM			
XTRL	K118/E5	MTFC	CM			
XTRL	K712/E5	MTFC	DTM			
XTRL	K713/A3	MTFC	CM			
XTV	K119/B1	CM	MTFC			
XVGA	K110/H6	MTFC	DTM			
XVGB	K515/D7	CM	MTFC			
XVGB	K516/H5	MTFC	DTM			
XVGB	K517/H5	MTFC	DTM			
XVGB	K518/A3	MTFC	CM			
XVGB'	K519/A3	MTFC	CM			
XVGB	N111/A3	MTFC	CM			
XVGB	N112/A3	MTFC	CM			
XX	K810/D5	MTFC	PRT			
0	L231/C1	MFCS	OS			
0	L236/F3	MFSR	AMRST			
0	P208/F8	OS	AC-CS			
0-9	L217/E8	MTC	AMRST			
1	L231/C1	MFCS	OS			
1	L236/F3	MFSR	AMRST			
1	P208/F8	OS	AC-CS			
1SE	K316/C4	MTC	MTFC	CM		
10	L231/B1	MFCS	OS			
10	L236/G3	MFSR	AMRST			
10	P208/F8	OS	AC-CS			
10LV	K609/E1	TLC	DTM			
10LV	K609/E1	TLC	CM			
11	K804/D7	MTC	MTFC	PRT		
11	P212/H5	AMRST	MTFC	CM	ORMC	OR
12LV	K609/E1	TLC	CM			
12LV	K609/E1	TLC	DTM			
2	L231/C1	MFCS	OS			

DESIG	LOCATION	FROM CIRCUIT	TO/FROM CIRCUIT OR LOCATION	
2	L236/F3	MFSR	AMRST	
2	P208/F8	OS	AC-CS	
2SA	K316/C4	MTC	MTFC	CM
3NA	K316/C4	MTC	MTFC	CM
4	L231/C1	MFCS	OS	
4	L236/G3	MFSR	AMRST	
4	P208/F8	OS	AC-CS	
4NE	K316/D4	MTC	MTFC	CM
5ST	K316/D4	MTC	MTFC	CM
6NT	K316/E4	MTC	MTFC	CM
7	L231/B1	MFCS	OS	
7	L236/G3	MFSR	AMRST	
7	P208/F8	OS	AC-CS	
7RN	K316/E4	MTC	MTFC	CM
8	K115/C8	CM	MISC	
8SP	K316/E4	MTC	MTFC	CM
9NP	K316/F4	MTC	MTFC	CM

ISSUE	DWG SIZE	LEAD INDEX
5	C2	

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J001	PART J0- BLOCK FLOW CHARTS - TEST FROM MAINTENANCE CENTER
J002	FLOWCHARTS FOR ANALYSIS OF TROUBLE CARDS
J003	RESERVED
J004	BLOCK FLOW CHARTS - MARKER AND PRETRANSLATOR CLASS OF TEST
J005	BLOCK FLOW CHARTS - REGISTER AND SENDER TESTS
J006	BLOCK FLOW CHARTS - TRUNK TESTS, SUBSCRIBER LINE TEST AND MARKER LINE VERIFICATION TEST
J007	BLOCK FLOW CHARTS - TRUNK TESTS
J008	BLOCK FLOW CHARTS - TRUNK TESTS, SUBSCRIBER LINE TEST AND MARKER LINE VERIFICATION TEST
J009	BLOCK FLOW CHARTS PROGRESSIVE MONITORING
J010	BLOCK FLOW CHARTS - MONITORING OR, IR AND OS
J011	BLOCK FLOW CHARTS MONITORING PARTICULAR OR, IR AND OS

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART J0
BLOCK FLOW CHARTS
TESTS FROM MAINTENANCE CENTER

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

SFD-10-01-J001

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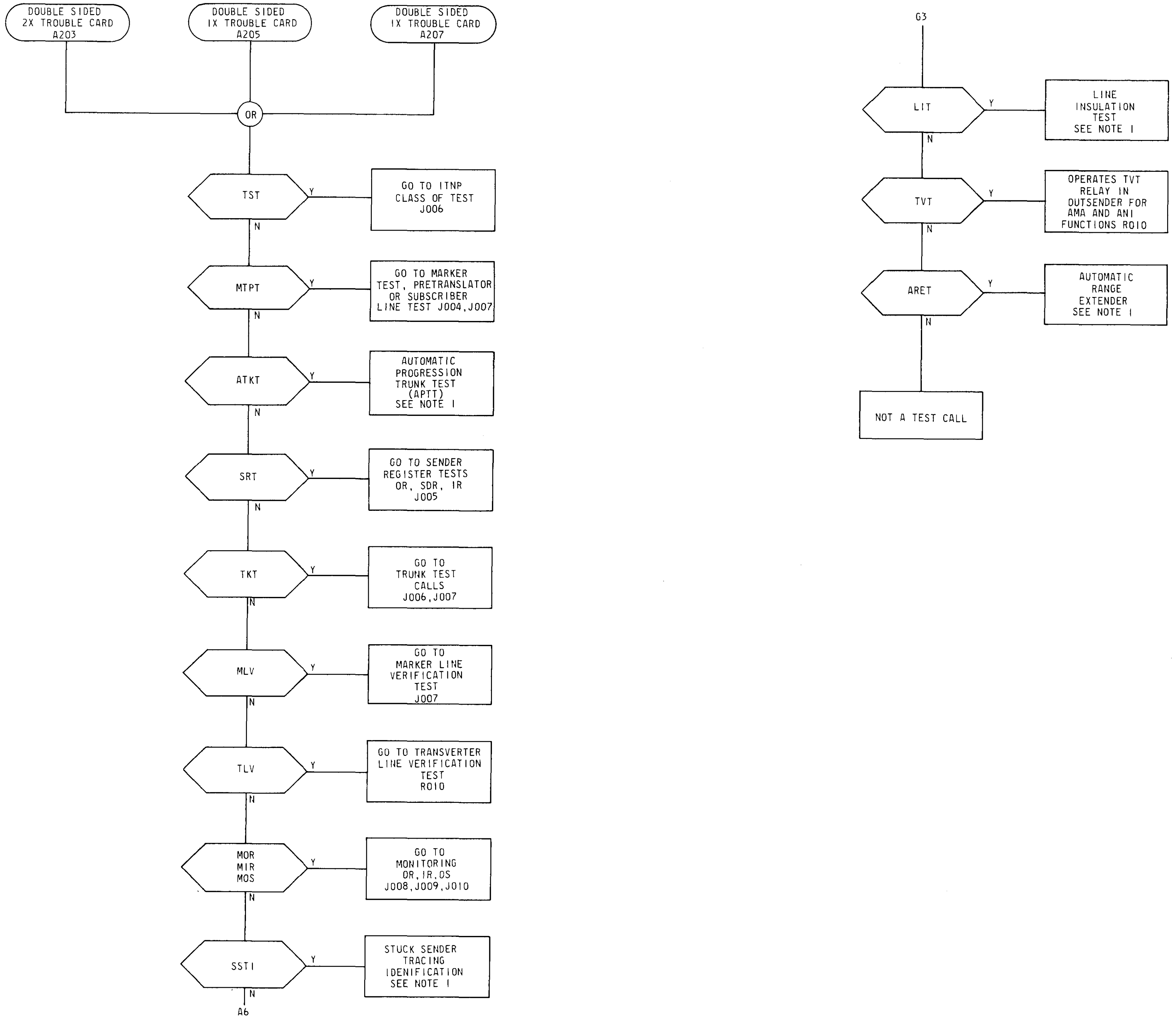

DOUBLE SIDED 2X TROUBLE CARD A203
DOUBLE SIDED 1X TROUBLE CARD A205
DOUBLE SIDED 1X TROUBLE CARD A207
OR
TST
Y
GO TO ITNP CLASS OF TEST J006
N
MTPT
GO TO MARKER TEST, PRETRANSLATOR OR SUBSCRIBER LINE TEST J004,J007
ATKT
AUTOMATIC PROGRESSION TRUNK TEST (APTT) SEE NOTE 1
SRT
GO TO SENDER REGISTER TESTS OR, SDR, IR J005
TKT
GO TO TRUNK TEST CALLS J006,J007
MLV
GO TO MARKER LINE VERIFICATION TEST J007
TLV
GO TO TRANSVERTER LINE VERIFICATION TEST R010
MOR MIR MOS
GO TO MONITORING OR,IR,OS J008,J009,J010
SSTI
STUCK SENDER TRACING IDENIFICATION SEE NOTE 1
A6
G3
LIT
LINE INSULATION TEST SEE NOTE 1
TVT
OPERATES TVT RELAY IN OUTSENDER FOR AMA AND ANI FUNCTIONS R010
ARET
AUTOMATIC RANGE EXTENDER SEE NOTE 1
NOT A TEST CALL

SHEET NOTES:

1. NOT COVERED IN SFD OR SCD. REFER TO RESPECTIVE SD OR CD FOR INFORMATION CONCERNING THESE FUNCTIONS.

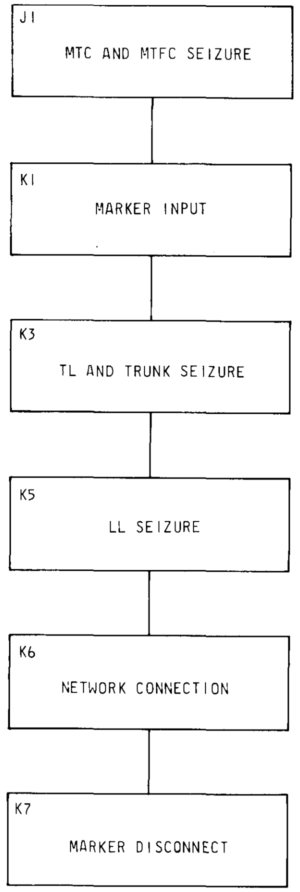
FLOW CHARTS FOR
ANALYSIS OF TROUBLE CARDS

ISSUE	DWG SIZE
5	6S

SFD-10-01- J002 BELL LABORATORIES

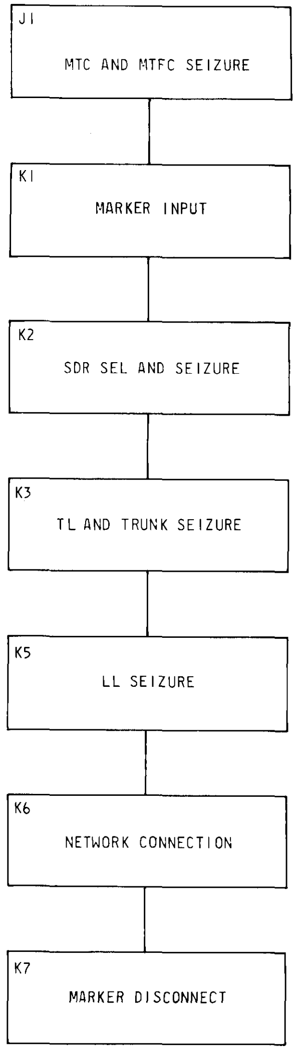
SFD-10-01-J002

DT CLASS OF TEST

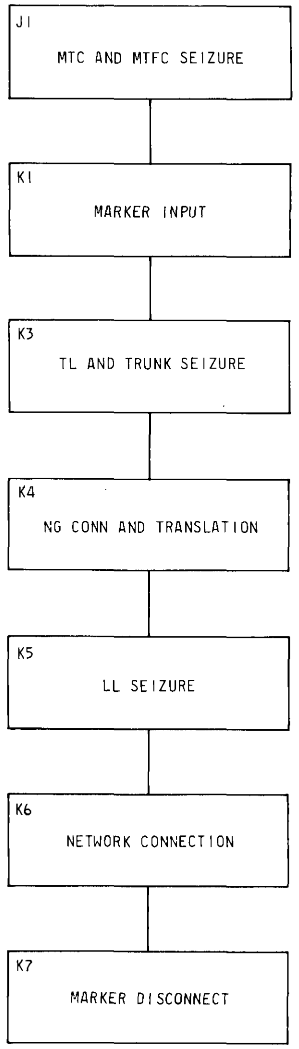


ORIG CLASS OF TEST

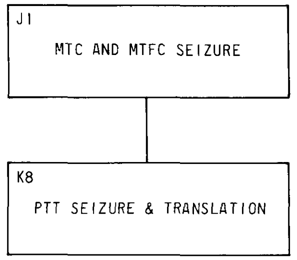
(OUTGOING CODE)



INC CLASS OF TEST



PTT CLASS OF TEST



ISSUE
5

SFD-10-01-J004

BLOCK FLOW CHARTS -
MARKER AND PRETRANSLATOR
CLASS OF TEST

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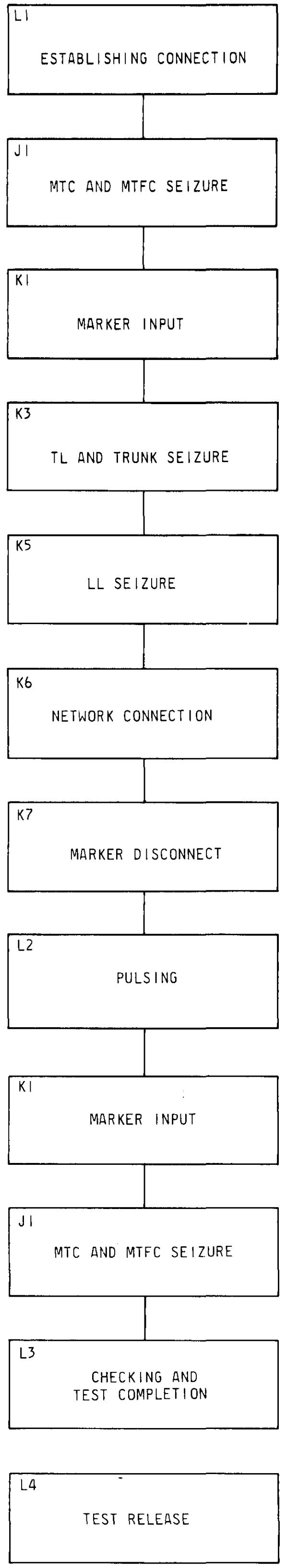
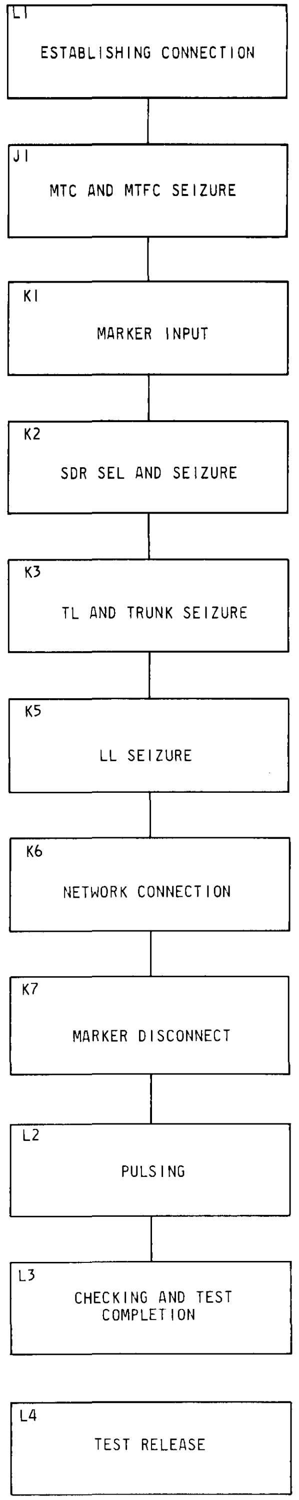
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

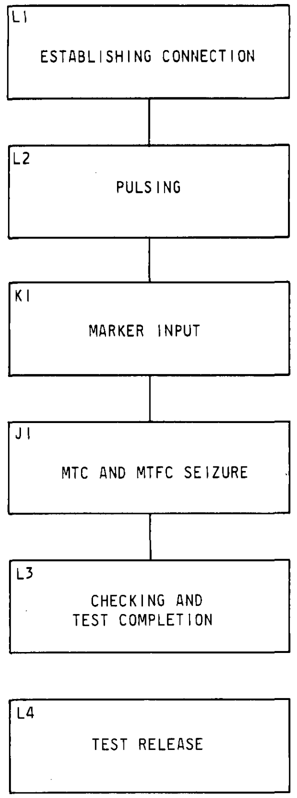
OR CLASS OF TEST



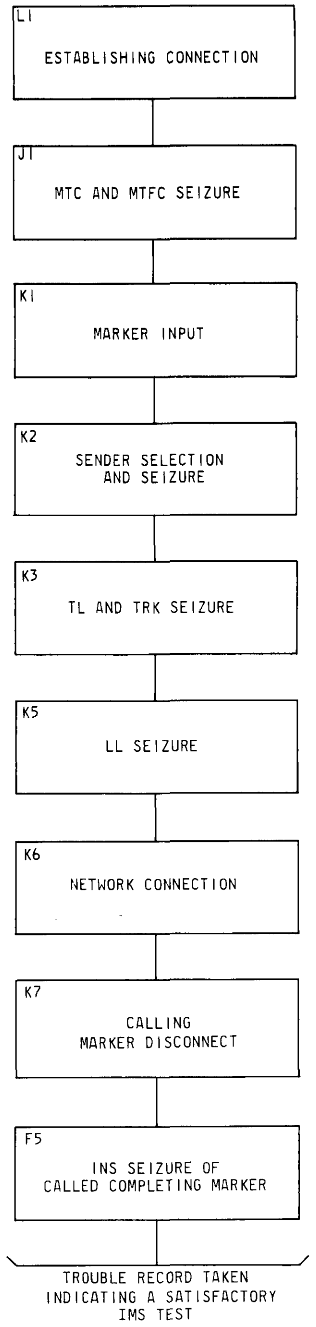
SDR CLASS OF TEST



IR CLASS OF TEST



INTERMARKER GROUP SENDER CLASS OF TEST



L1
ESTABLISHING CONNECTION
J1
MTC AND MTFC SEIZURE
K1
MARKER INPUT
K2
SENDER SELECTION AND SEIZURE
K3
TL AND TRK SEIZURE
K5
LL SEIZURE
K6
NETWORK CONNECTION
K7
CALLING MARKER DISCONNECT
F5
INS SEIZURE OF CALLED COMPLETING MARKER
TROUBLE RECORD TAKEN INDICATING A SATISFACTORY IMS TEST

BLOCK FLOW CHARTS
REGISTER & SENDER TESTS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- J005

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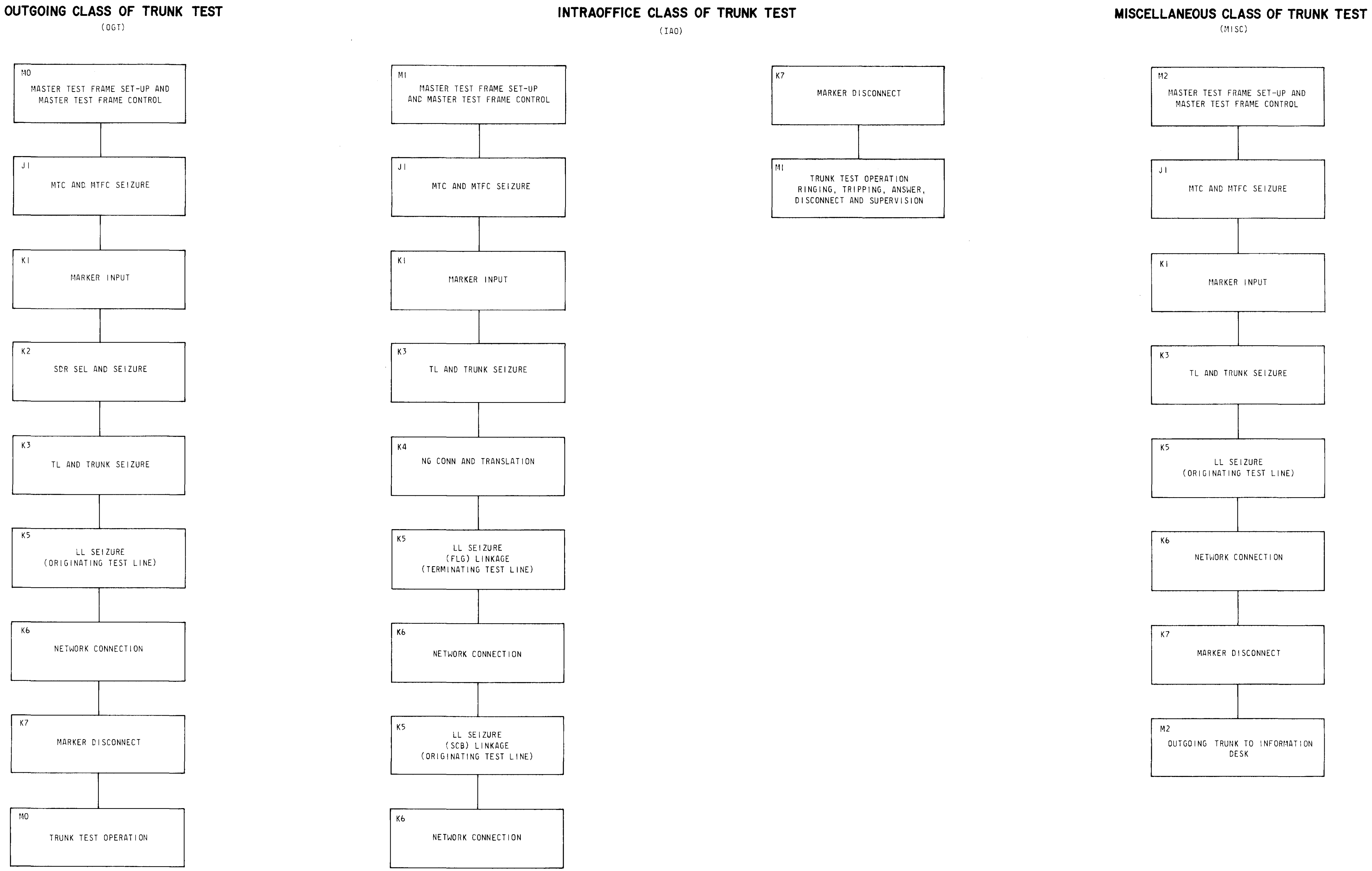
SFD-10-01-J005


OUTGOING CLASS OF TRUNK TEST
(OGT)
M0 MASTER TEST FRAME SET-UP AND MASTER TEST FRAME CONTROL
J1 MTC AND MTFC SEIZURE
K1 MARKER INPUT
K2 SDR SEL AND SEIZURE
K3 TL AND TRUNK SEIZURE
K5 LL SEIZURE (ORIGINATING TEST LINE)
K6 NETWORK CONNECTION
K7 MARKER DISCONNECT
M0 TRUNK TEST OPERATION
INTRAOFFICE CLASS OF TRUNK TEST
(IAO)
M1 MASTER TEST FRAME SET-UP AND MASTER TEST FRAME CONTROL
J1 MTC AND MTFC SEIZURE
K1 MARKER INPUT
K3 TL AND TRUNK SEIZURE
K4 NG CONN AND TRANSLATION
K5 LL SEIZURE (FLG) LINKAGE (TERMINATING TEST LINE)
K6 NETWORK CONNECTION
K5 LL SEIZURE (SCB) LINKAGE (ORIGINATING TEST LINE)
K6 NETWORK CONNECTION
K7 MARKER DISCONNECT
M1 TRUNK TEST OPERATION RINGING, TRIPPING, ANSWER, DISCONNECT AND SUPERVISION
MISCELLANEOUS CLASS OF TRUNK TEST
(MISC)
M2 MASTER TEST FRAME SET-UP AND MASTER TEST FRAME CONTROL
J1 MTC AND MTFC SEIZURE
K1 MARKER INPUT
K3 TL AND TRUNK SEIZURE
K5 LL SEIZURE (ORIGINATING TEST LINE)
K6 NETWORK CONNECTION
K7 MARKER DISCONNECT
M2 OUTGOING TRUNK TO INFORMATION DESK

ISSUE
5

SFD-10-01-J006

BLOCK FLOW CHART
TRUNK TESTS, SUBSCRIBER LINE
TEST AND MARKER LINE
VERIFICATION TEST

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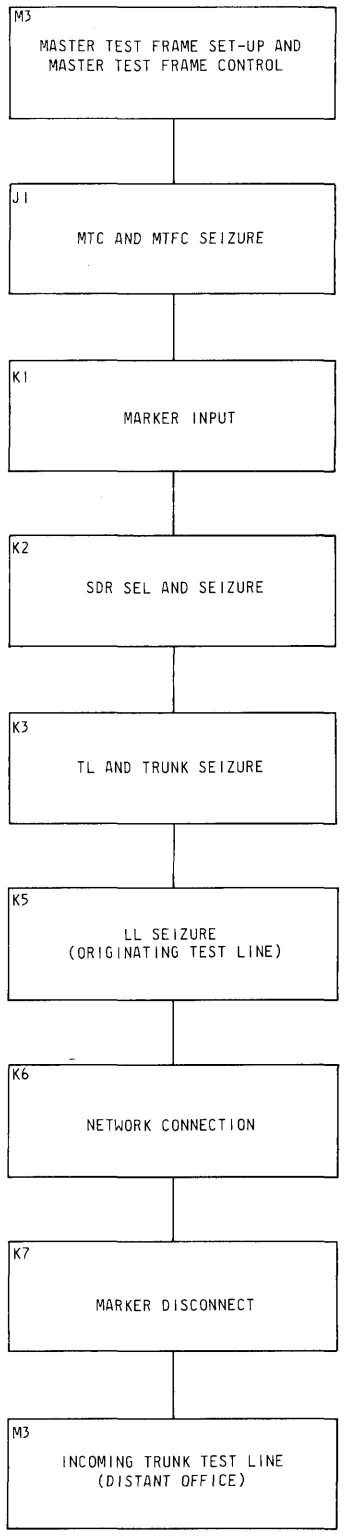
DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-73)

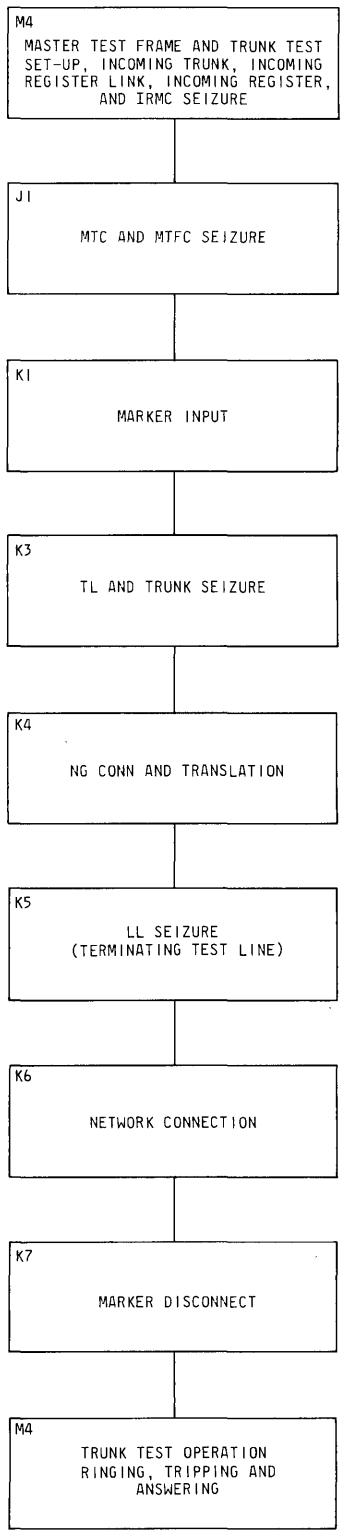
INCOMING TRUNK IN DISTANT OFFICE CLASS OF TEST

(ITDO)


M3
MASTER TEST FRAME SET-UP AND MASTER TEST FRAME CONTROL
J1
MTC AND MTFC SEIZURE
K1
MARKER INPUT
K2
SDR SEL AND SEIZURE
K3
TL AND TRUNK SEIZURE
K5
LL SEIZURE (ORIGINATING TEST LINE)
K6
NETWORK CONNECTION
K7
MARKER DISCONNECT
M3
INCOMING TRUNK TEST LINE (DISTANT OFFICE)

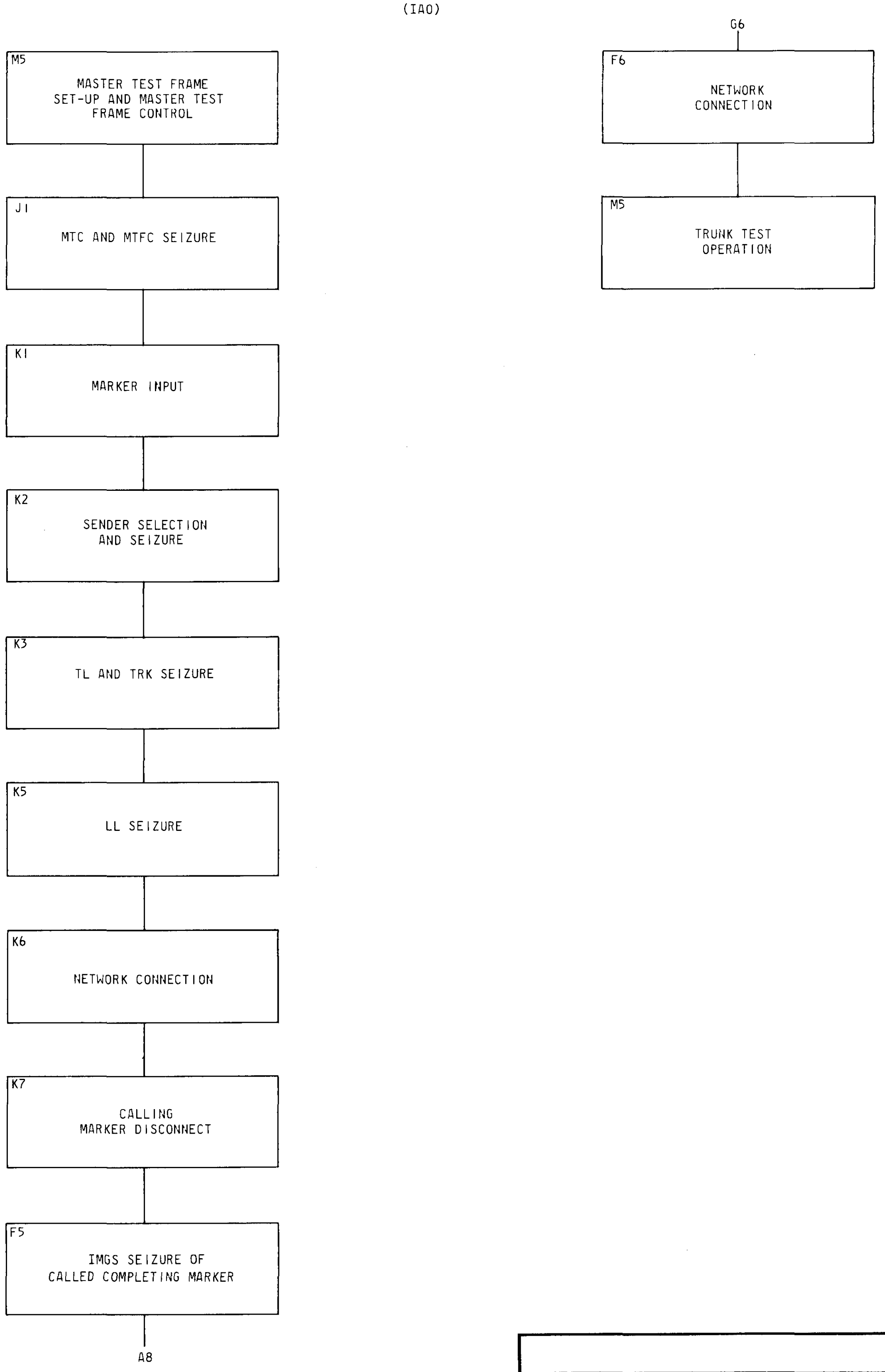
INCOMING TRUNK-NO PULSING CLASS OF TRUNK TEST

(ITNP)


M4
MASTER TEST FRAME AND TRUNK TEST SET-UP, INCOMING TRUNK, INCOMING REGISTER LINK, INCOMING REGISTER, AND IRMC SEIZURE
J1
MTC AND MTFC SEIZURE
K1
MARKER INPUT
K3
TL AND TRUNK SEIZURE
K4
NG CONN AND TRANSLATION
K5
LL SEIZURE (TERMINATING TEST LINE)
K6
NETWORK CONNECTION
K7
MARKER DISCONNECT
M4
TRUNK TEST OPERATION RINGING, TRIPPING AND ANSWERING

IMG TRUNK TEST-IAO CLASS OF TEST

(IAO)


M5
MASTER TEST FRAME SET-UP AND MASTER TEST FRAME CONTROL
J1
MTC AND MTFC SEIZURE
K1
MARKER INPUT
K2
SENDER SELECTION AND SEIZURE
K3
TL AND TRK SEIZURE
K5
LL SEIZURE
K6
NETWORK CONNECTION
K7
CALLING MARKER DISCONNECT
F5
IMGS SEIZURE OF CALLED COMPLETING MARKER
A8
G6
F6
NETWORK CONNECTION
M5
TRUNK TEST OPERATION

BLOCK FLOW CHARTS
TRUNK TESTS

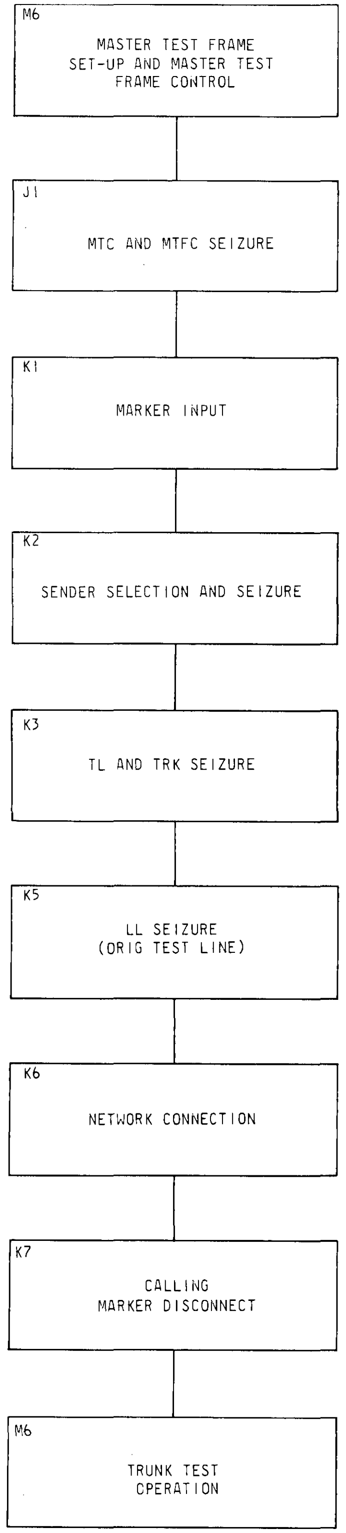
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- J007

SFD-10-01-J007

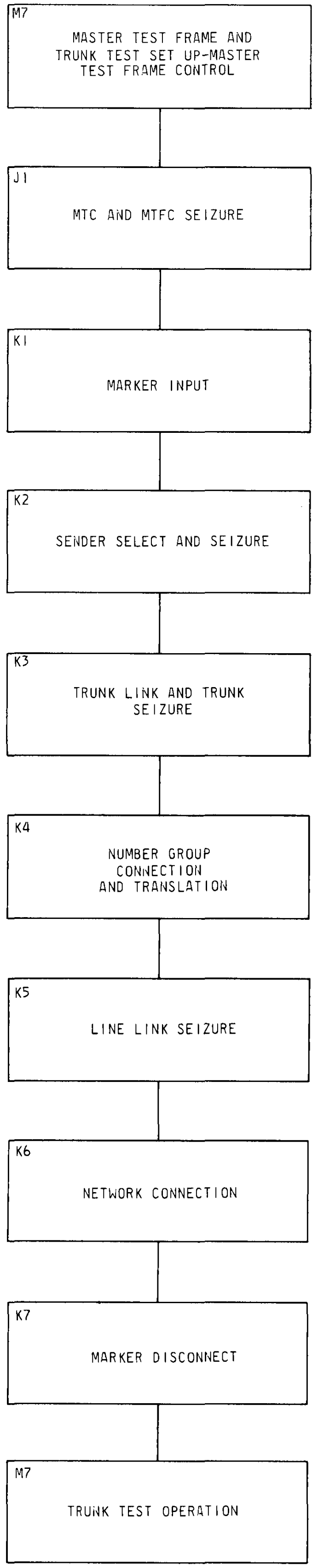
OGT-(TANDEM) TRUNK TEST-
OGT CLASS OF TRUNK TEST

(OGT)


M6
MASTER TEST FRAME SET-UP AND MASTER TEST FRAME CONTROL
J1
MTC AND MTFC SEIZURE
K1
MARKER INPUT
K2
SENDER SELECTION AND SEIZURE
K3
TL AND TRK SEIZURE
K5
LL SEIZURE (ORIG TEST LINE)
K6
NETWORK CONNECTION
K7
CALLING MARKER DISCONNECT
M6
TRUNK TEST OPERATION

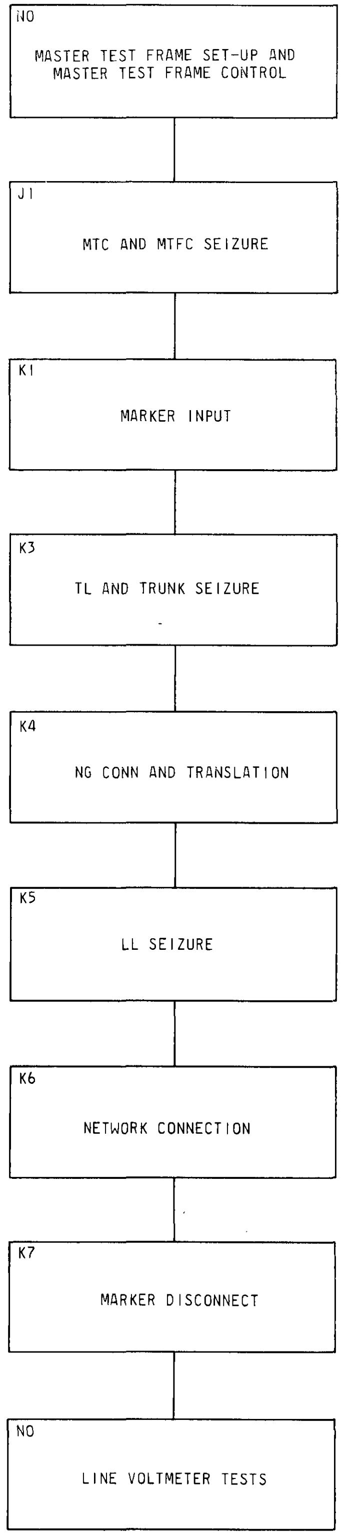
INCOMING TANDEM TRUNK TEST

(ITNP CLASS OF TRUNK TEST)
(ITNP)


M7
MASTER TEST FRAME AND TRUNK TEST SET UP-MASTER TEST FRAME CONTROL
J1
MTC AND MTFC SEIZURE
K1
MARKER INPUT
K2
SENDER SELECT AND SEIZURE
K3
TRUNK LINK AND TRUNK SEIZURE
K4
NUMBER GROUP CONNECTION AND TRANSLATION
K5
LINE LINK SEIZURE
K6
NETWORK CONNECTION
K7
MARKER DISCONNECT
M7
TRUNK TEST OPERATION

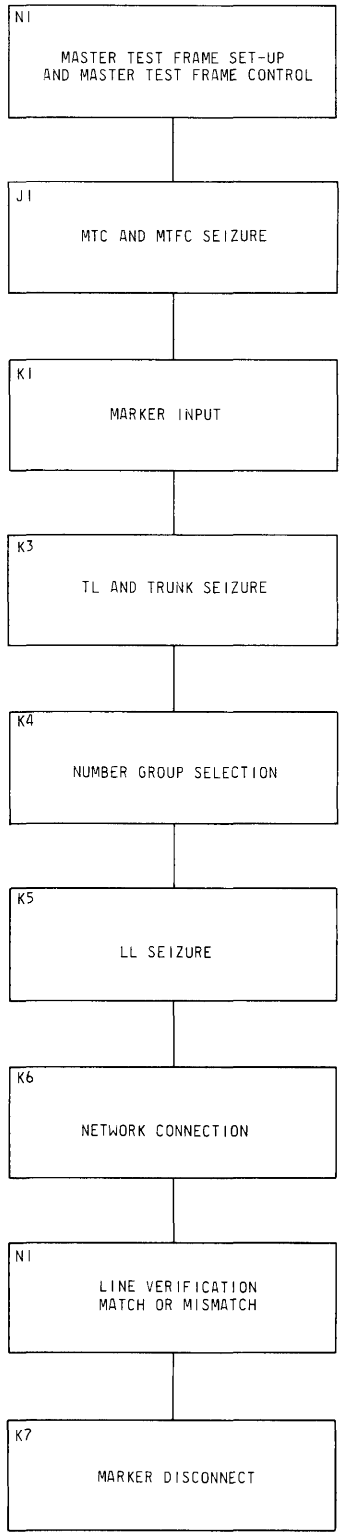
SUBSCRIBER LINE CLASS OF TEST

(LT)



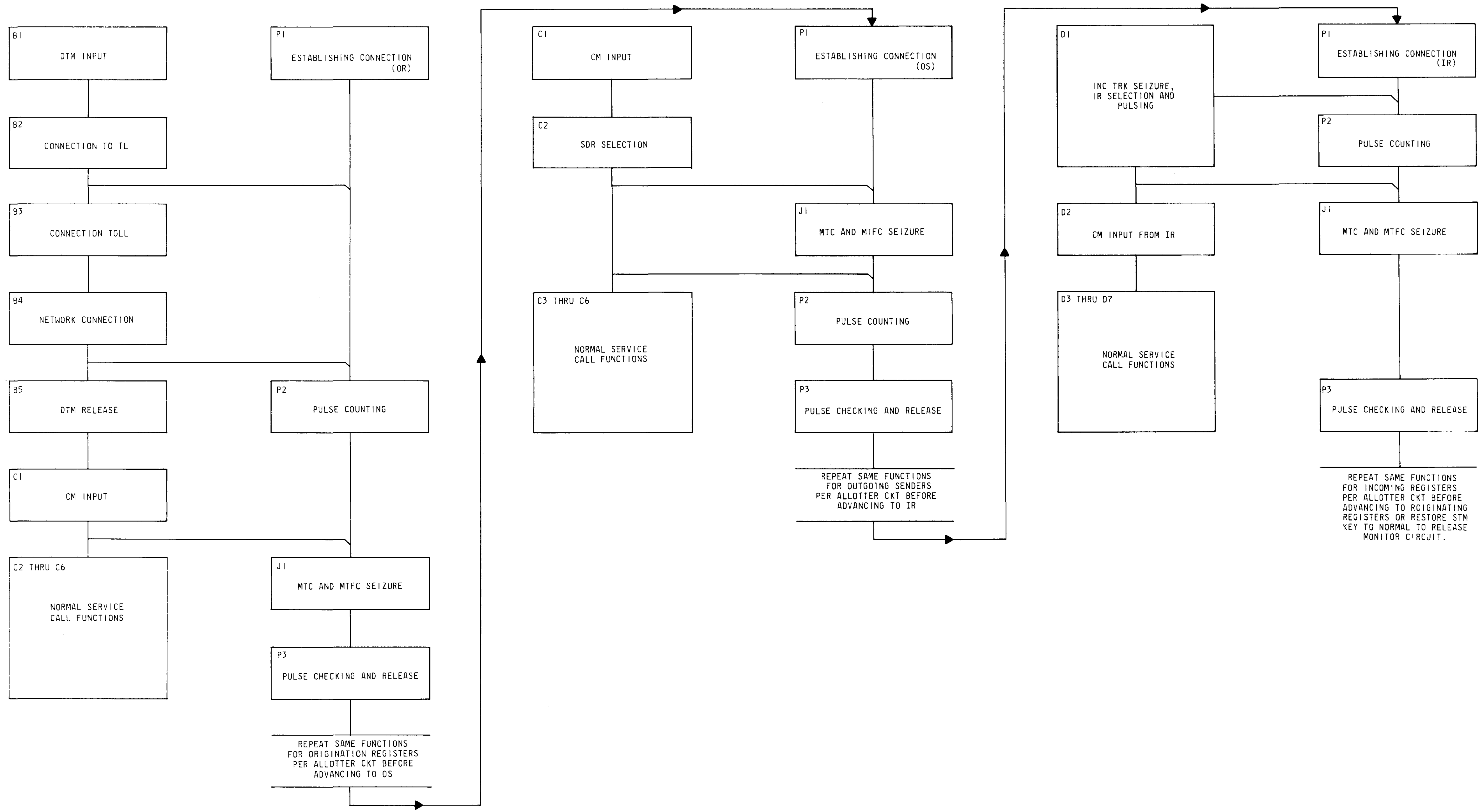
MARKER LINE VERIFCATION TEST

(FIRST STAGE)
(MLV)



ISSUE 5	DWG SIZE 6S
BLOCK FLOW CHARTS TRUNK TESTS, SUBSCRIBER LINE TEST, AND MARKER LINE VERIFICATION TEST	
SFD-10-01- J008	BELL LABORATORIES

SFD-10-01-J008

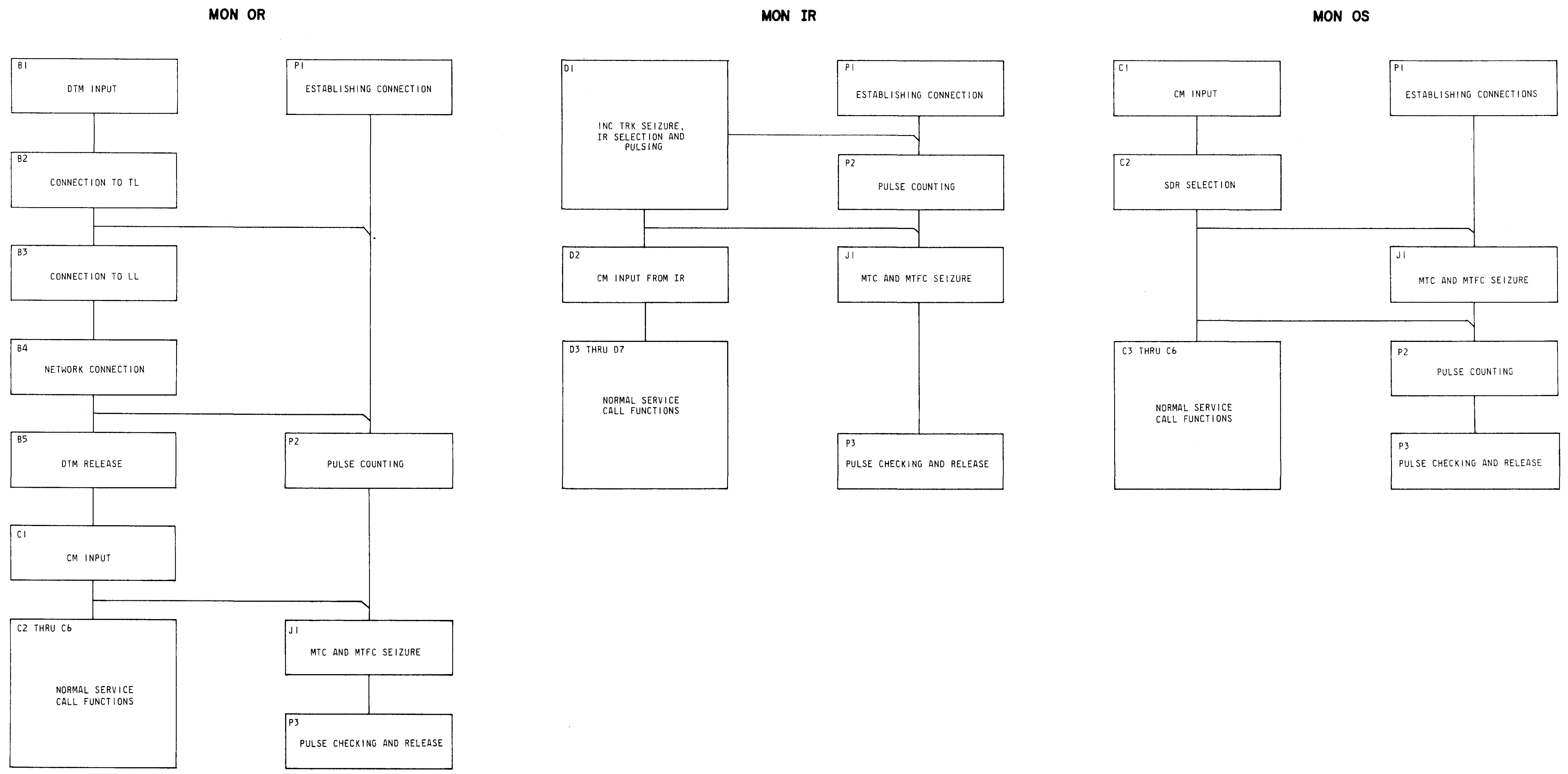


BLOCK FLOW CHART
PROGRESSIVE MONITORING

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES
SFD-10-01- J009

SFD-10-01-J009


MON OR
B1 DTM INPUT
B2 CONNECTION TO TL
B3 CONNECTION TO LL
B4 NETWORK CONNECTION
B5 DTM RELEASE
C1 CM INPUT
C2 THRU C6 NORMAL SERVICE CALL FUNCTIONS
P1 ESTABLISHING CONNECTION
P2 PULSE COUNTING
J1 MTC AND MTFC SEIZURE
P3 PULSE CHECKING AND RELEASE
MON IR
D1 INC TRK SEIZURE, IR SELECTION AND PULSING
D2 CM INPUT FROM IR
D3 THRU D7 NORMAL SERVICE CALL FUNCTIONS
P1 ESTABLISHING CONNECTION
P2 PULSE COUNTING
J1 MTC AND MTFC SEIZURE
P3 PULSE CHECKING AND RELEASE
MON OS
C1 CM INPUT
C2 SDR SELECTION
C3 THRU C6 NORMAL SERVICE CALL FUNCTIONS
P1 ESTABLISHING CONNECTIONS
J1 MTC AND MTFC SEIZURE
P2 PULSE COUNTING
P3 PULSE CHECKING AND RELEASE

ISSUE	DWG SIZE	BLOCK FLOW CHART MONITORING OR, IR AND OS
5	6S	

SFD-10-01- | J010 | BELL LABORATORIES

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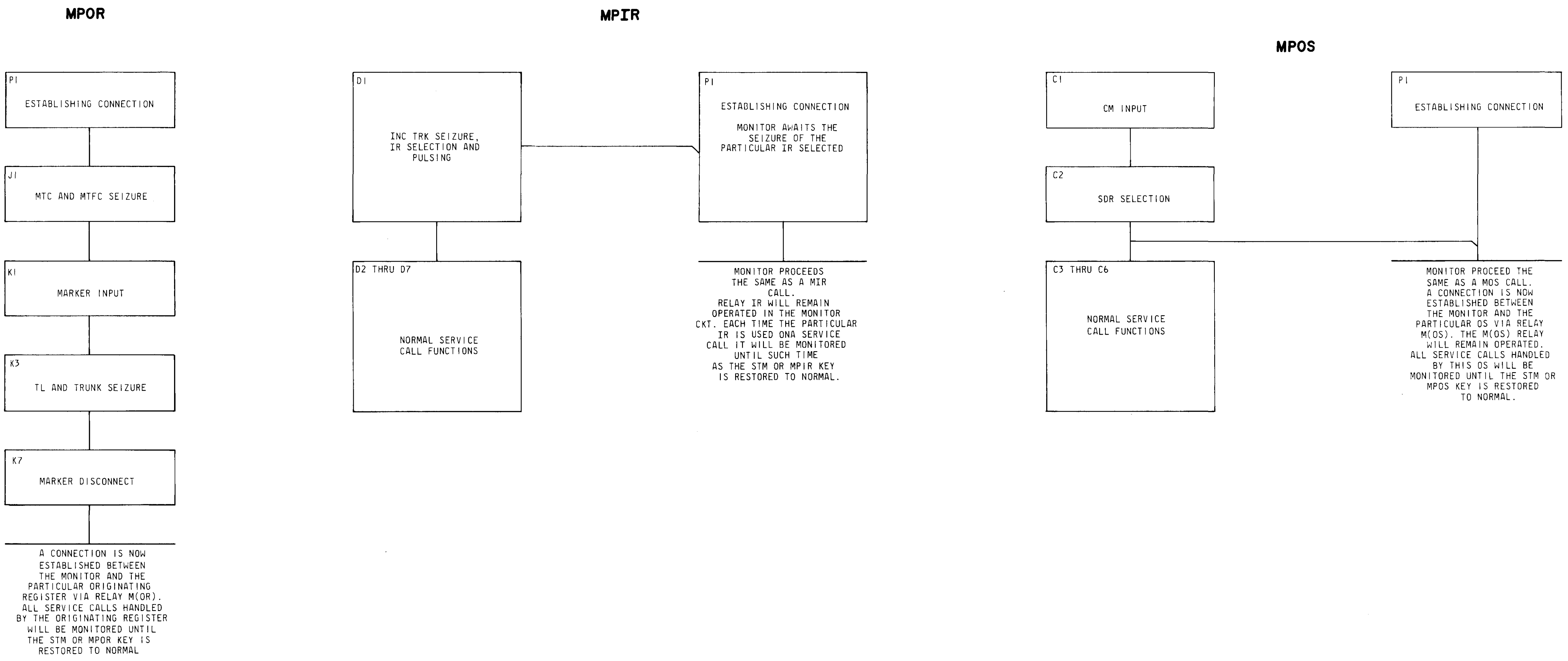


MONITOR AWAITS THE SEIZURE OF THE PARTICULAR IR SELECTED

A CONNECTION IS NOW ESTABLISHED BETWEEN THE MONITOR AND THE PARTICULAR ORIGINATING REGISTER VIA RELAY M(OR). ALL SERVICE CALLS HANDLED BY THE ORIGINATING REGISTER WILL BE MONITORED UNTIL THE STM OR MPOR KEY IS RESTORED TO NORMAL

MONITOR PROCEEDS THE SAME AS A MIR CALL. RELAY IR WILL REMAIN OPERATED IN THE MONITOR CKT. EACH TIME THE PARTICULAR IR IS USED ONA SERVICE CALL IT WILL BE MONITORED UNTIL SUCH TIME AS THE STM OR MPIR KEY IS RESTORED TO NORMAL.

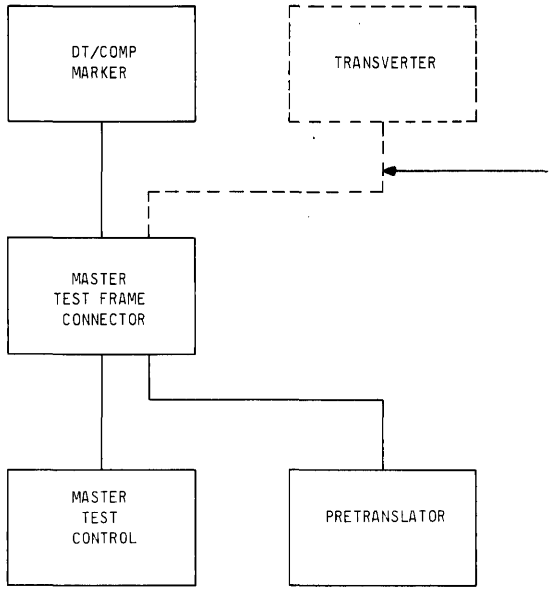
MONITOR PROCEED THE SAME AS A MOS CALL. A CONNECTION IS NOW ESTABLISHED BETWEEN THE MONITOR AND THE PARTICULAR OS VIA RELAY M(OS). THE M(OS) RELAY WILL REMAIN OPERATED. ALL SERVICE CALLS HANDLED BY THIS OS WILL BE MONITORED UNTIL THE STM OR MPOS KEY IS RESTORED TO NORMAL.

BLOCK FLOW CHART
MONITORING PARTICULAR
OR, IR AND OS

DWG SIZE 6S
ISSUE 5

BELL LABORATORIES SFD-10-01- J011

SFD-10-01-J011



AMA FUNCTIONS NOT COVERED IN THIS ISSUE, INTERACTION OF TRANSVERTER WITH MTFC PREFERENCE CIRCUIT SHOWN IN J1 PART

INDEX

PAGE NO.	TITLE
J101	PART J1- INDEX- MTC AND MTFC SEIZURE
J102	SEQUENCE CHART - MTC AND MTFC SEIZURE
J103	MTC- TEST START AND RELEASE
J104	MTC- TEST CLASS SELECTION- SWITCHES
J105	MTC- TEST CLASS SELECTION- KEYS
J106	MTC- CLASS OF TEST LAMPS AND AUXILLIARY TEST CLASS RELAYS
J107	MTC- TEST CONTROL RELAYS
J108	MTFC- PREFERENCE CIRCUIT FOR TROUBLE RECORDING, TESTING AND MONITORING (SD-25805-01)
J109	
J110	
J111	
J112	MTFC-PREFERENCE CIRCUIT FOR TROUBLE RECORDING, TESTING AND MONITORING (SD-27718-01)
J113	
J114	
J115	
J116	RESERVED
J117	MTFC-TEST START, MAKE BUSY AND IDLE INDICATING LEADS
J118	MTFC-MARKER, PRETRANSLATOR AND TRANSVERTER SELECTION RELAYS
J119	TEST CONNECTOR RELAYS
J120	MTFC-CONNECTOR RELAYS (CM)
J121	MTFC-CONNECTOR RELAYS (DTM)
J122	MTFC-TROUBLE RECORDER START
J123	MTC-PREFERENCE
J124	PROGRESS AND IDENTIFICATION LAMP CONTROL

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

PART J1
INDEX- MASTER TEST CONTROL
AND MASTER TEST FRAME CONNECTOR
SEIZURE

DWG SIZE 6S
ISSUE 5

BELL LABORATORIES
SFD-10-01-
J101

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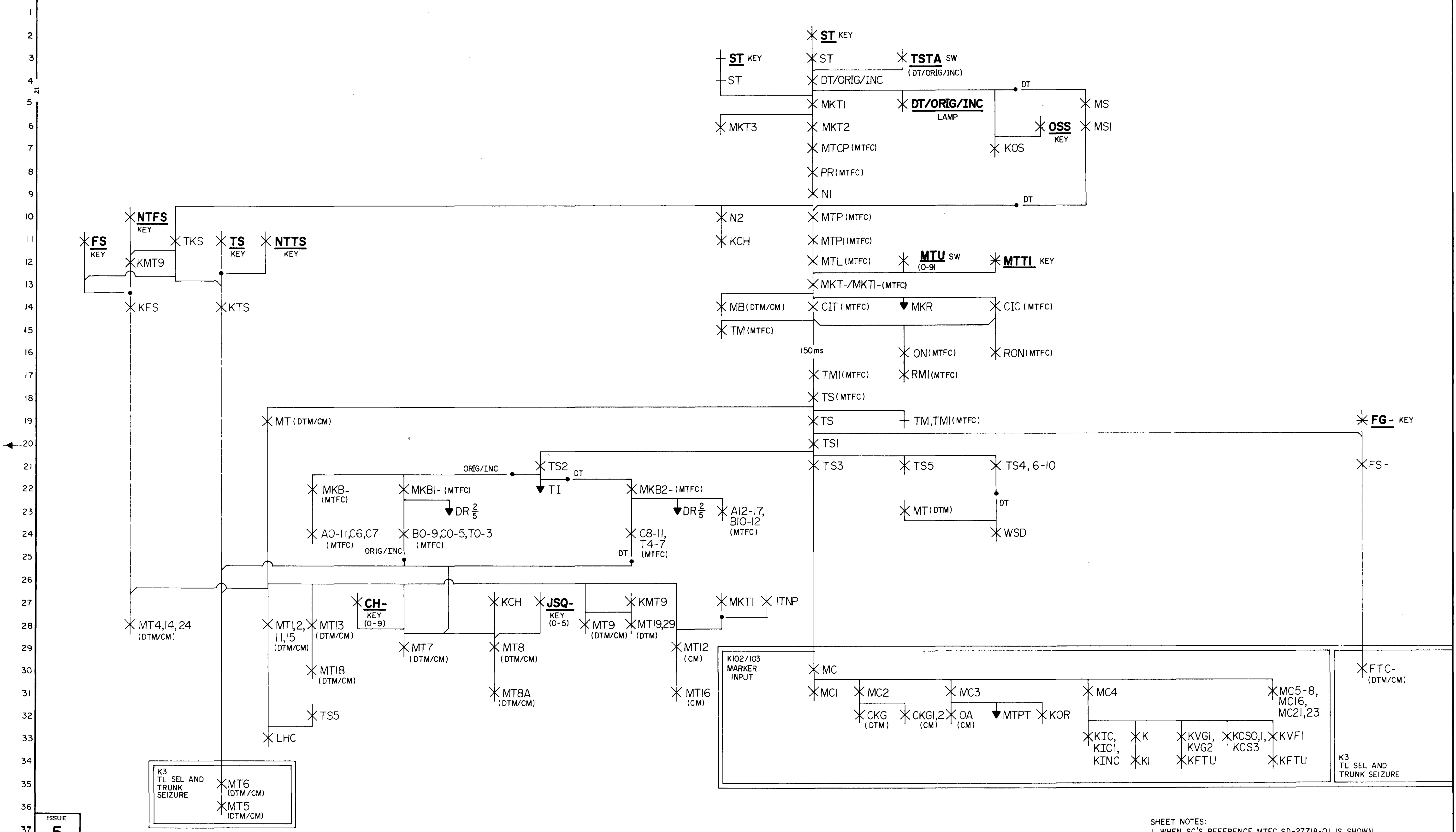
DT/ORIG/INC MARKER CLASS OF TEST (SEE NOTE 1)



SHEET NOTES:
1. WHEN SC'S REFERENCE MTFC,SD-27718-01 IS SHOWN.

ISSUE
5

SFD-10-01-J102

SEQUENCE CHART
MASTER TEST CONTROL AND
MASTER TEST FRAME CONNECTOR
SEIZURE
DT/ORIG/INC MARKER CLASS OF TEST

DWG SIZE 6S

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INCORPORATED

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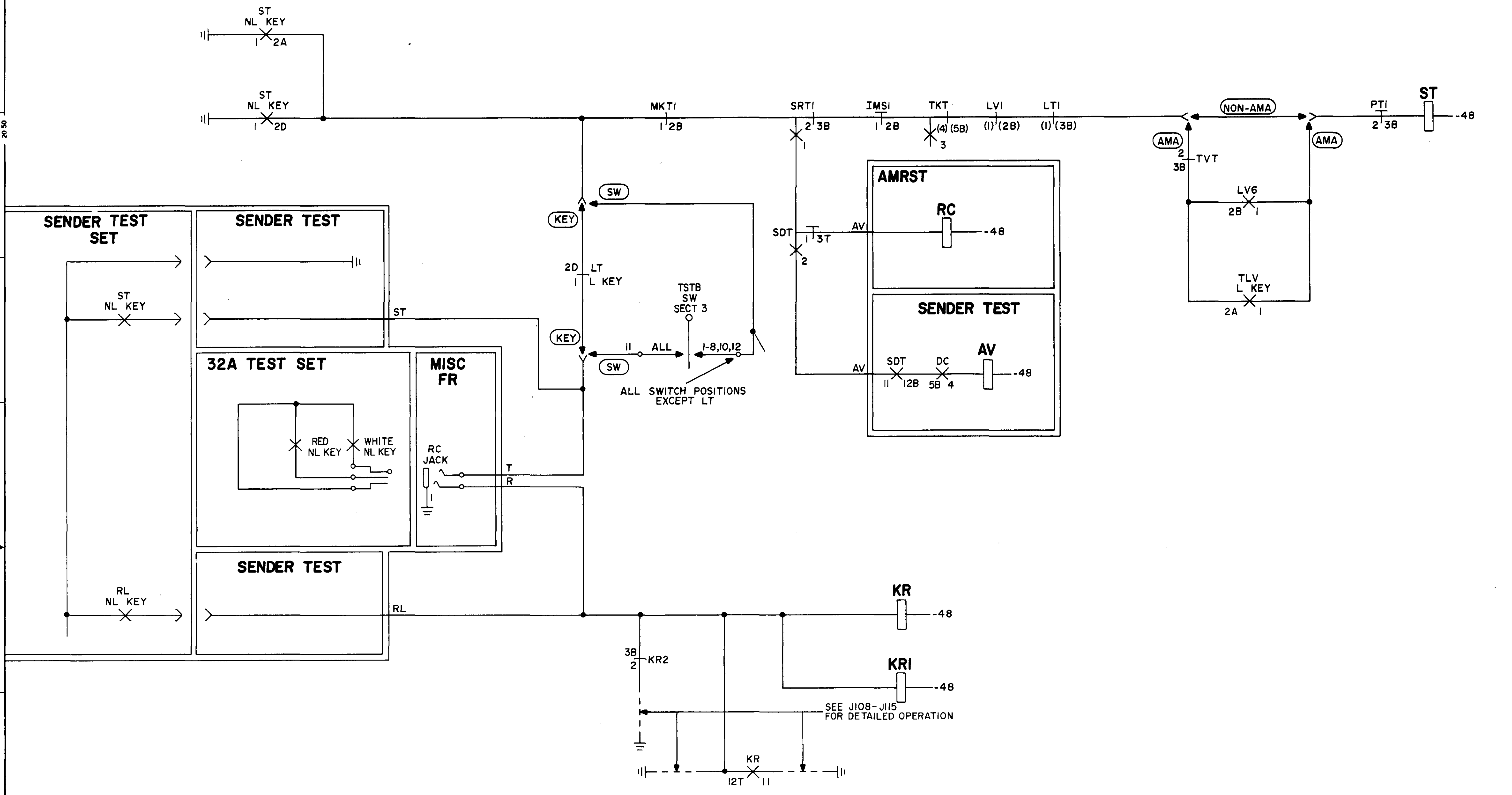
E-7421-L (4-71)

SFD-10-01-J102

MASTER TEST CONTROL



MASTER TEST CONTROL
TEST START AND RELEASE

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- J103

E-7421 (6-75)
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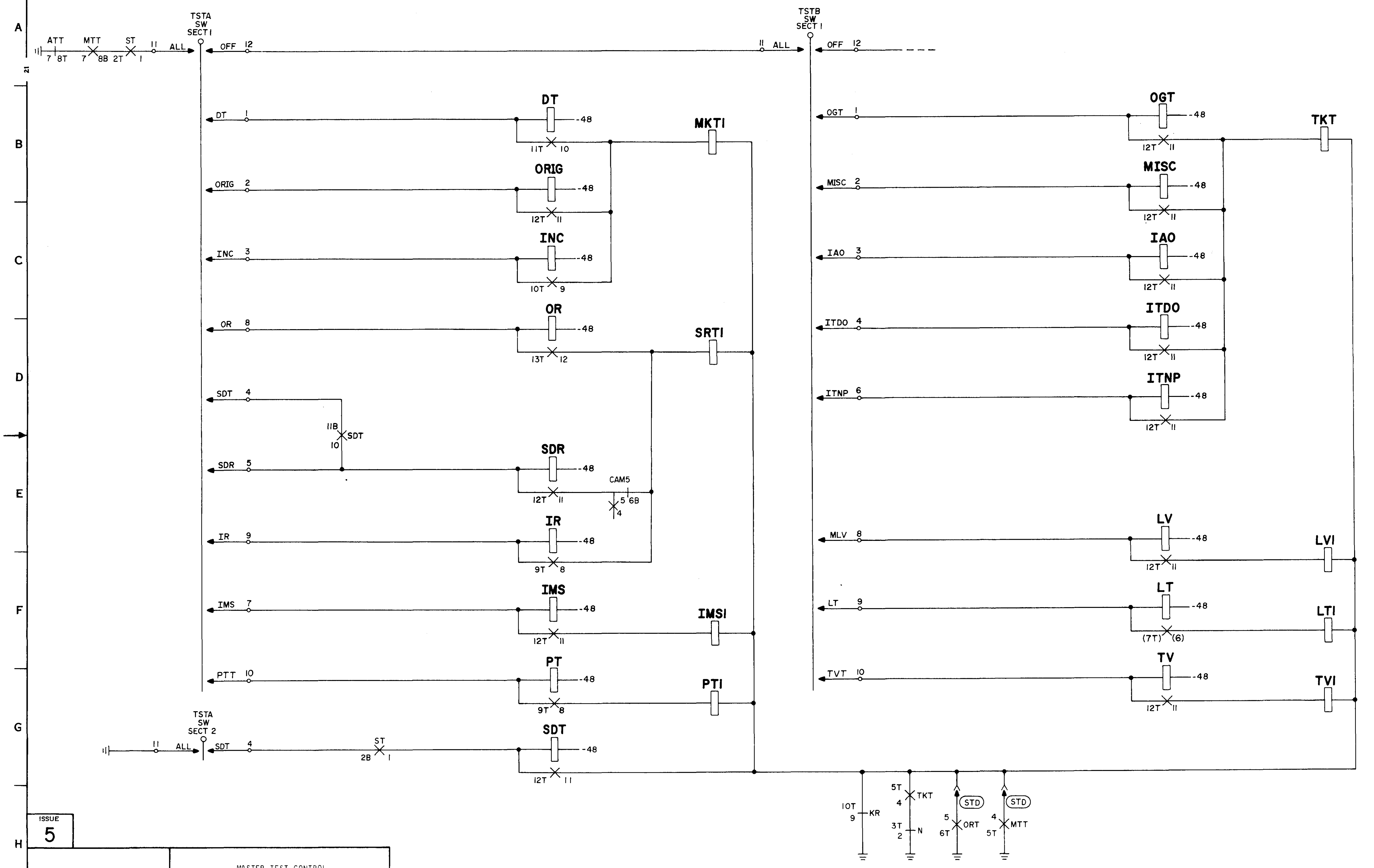
MASTER TEST CONTROL



ISSUE
5

SFD-10-01-J104

MASTER TEST CONTROL
TEST CLASS SELECTION
SWITCHES

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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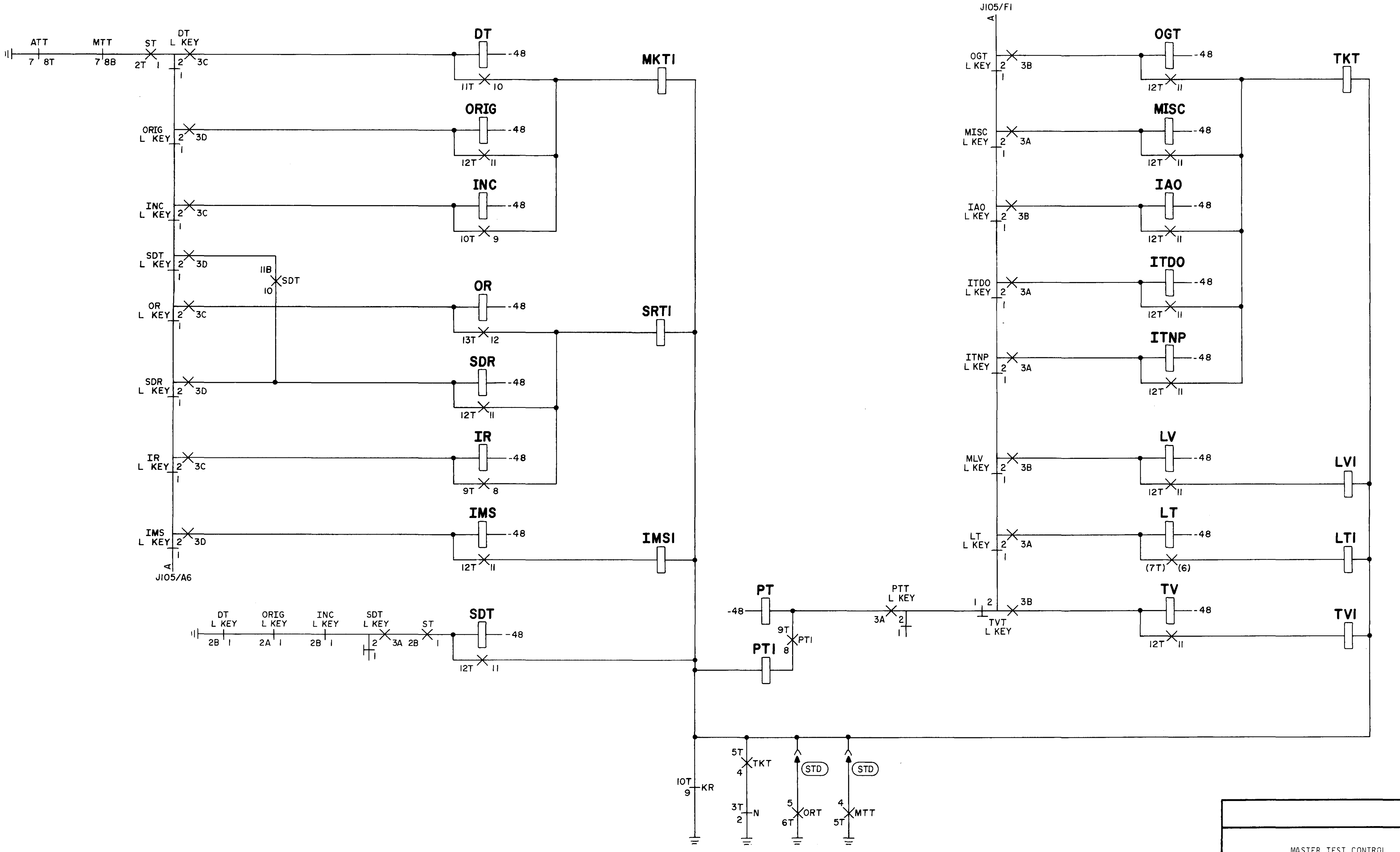
E-7481-L (4-73)

MASTER TEST CONTROL



MASTER TEST CONTROL TEST CLASS SELECTION LEVER KEYS	DWG SIZE 6S
	ISSUE 5
BELL LABORATORIES	SFD-10-01-J105

SFD-10-01-J105

K&E 19 1153 6-76 41230+

E-7421 (6-75)
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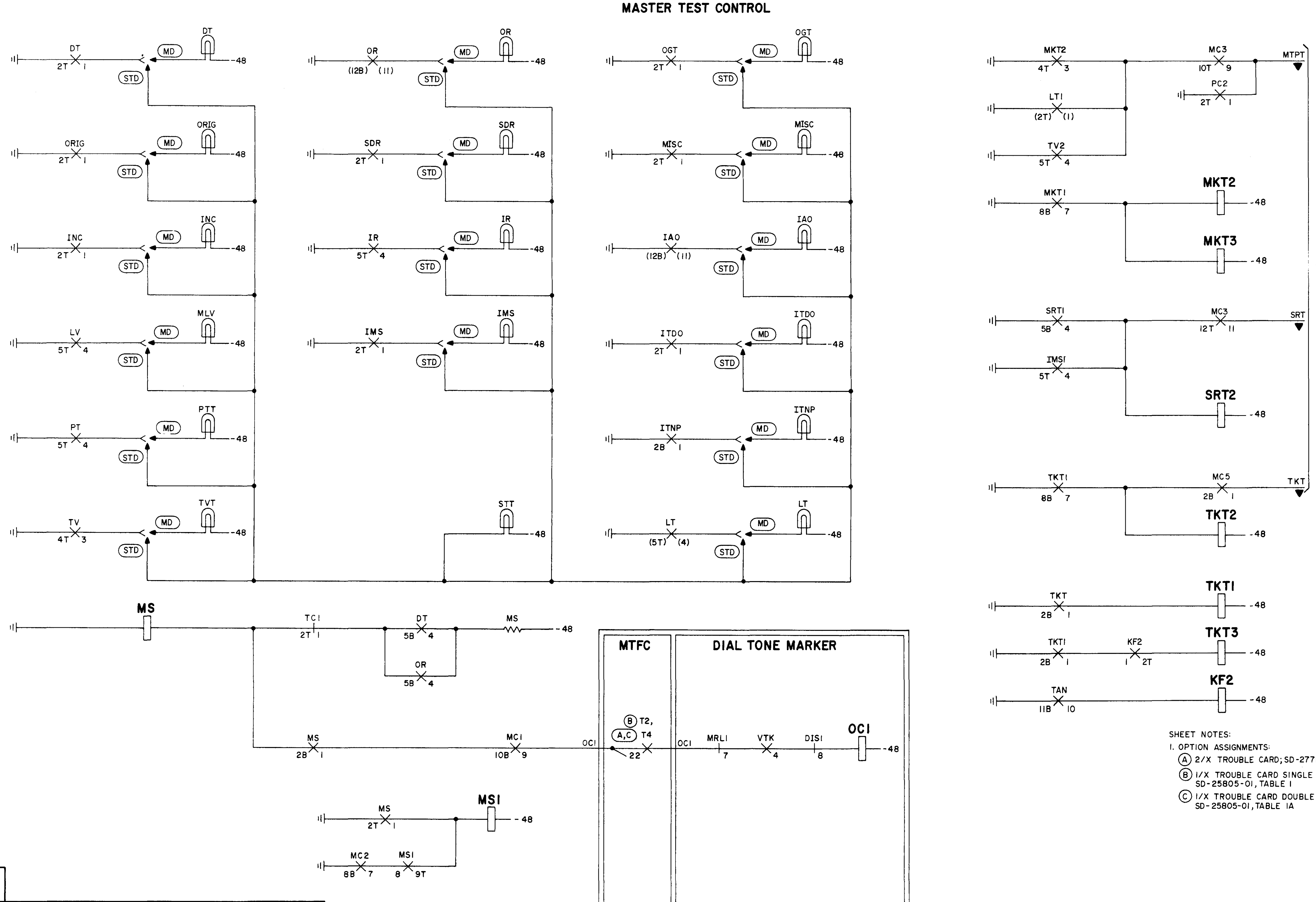
MASTER TEST CONTROL



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-J106

MASTER TEST CONTROL
CLASS OF TEST LAMPS AND
AUXILIARY TEST CLASS RELAYS

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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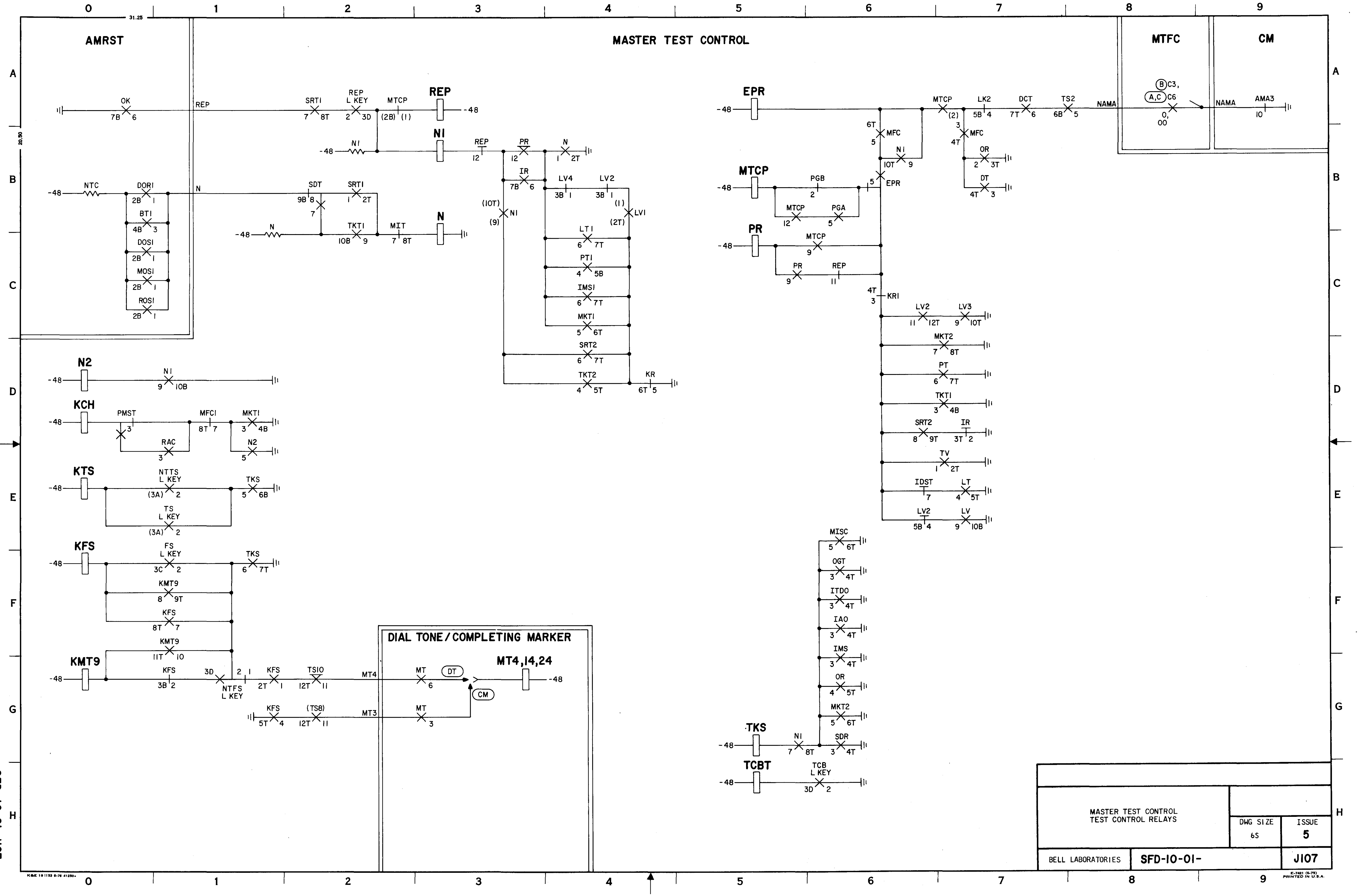
E-7481-L (4-73)

SFD-10-01-J106



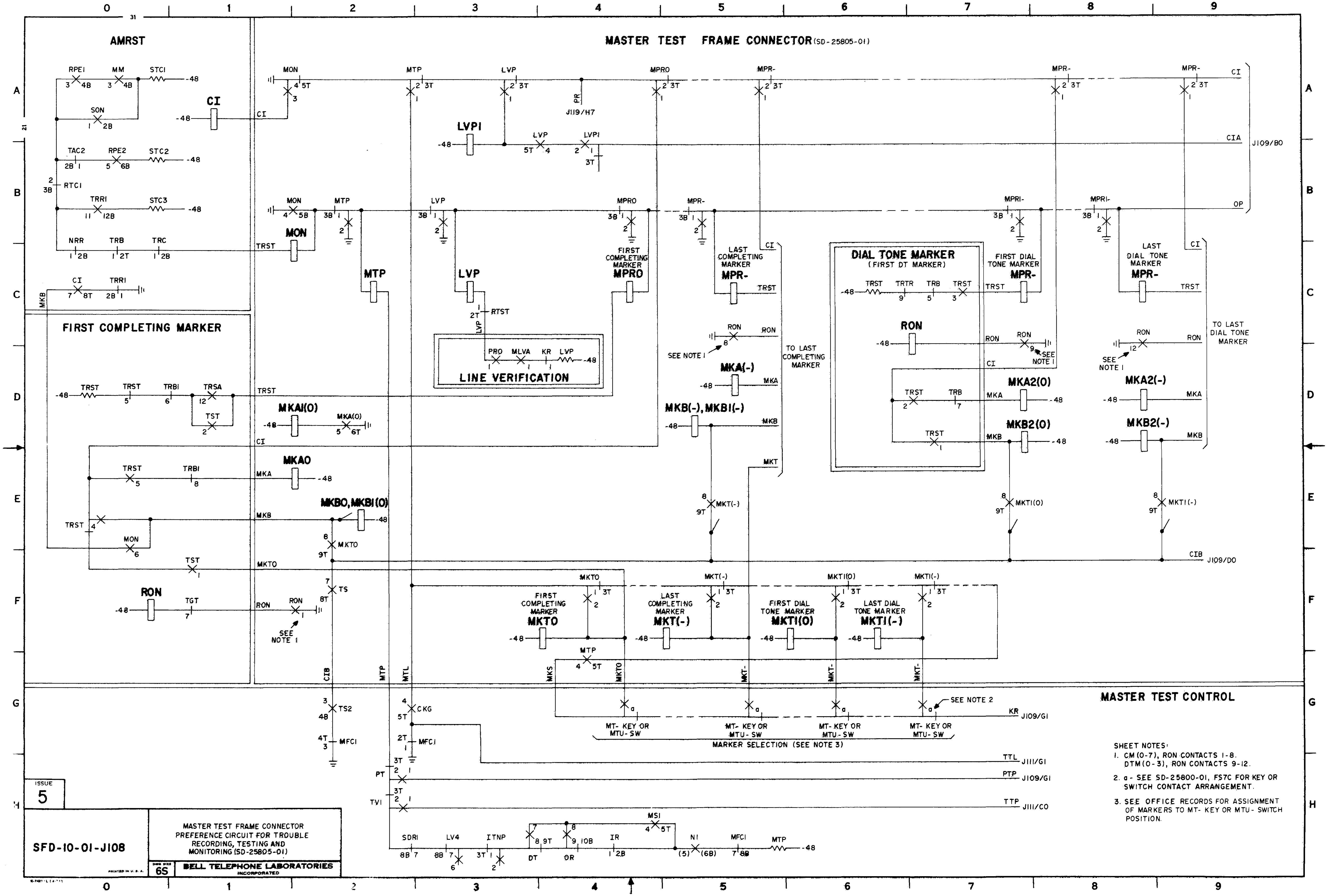
MASTER TEST CONTROL
TEST CONTROL RELAYS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES

SFD-10-01-

J107



ISSUE
5

SFD-10-01-J108

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND
MONITORING (SD-25805-01)

6S

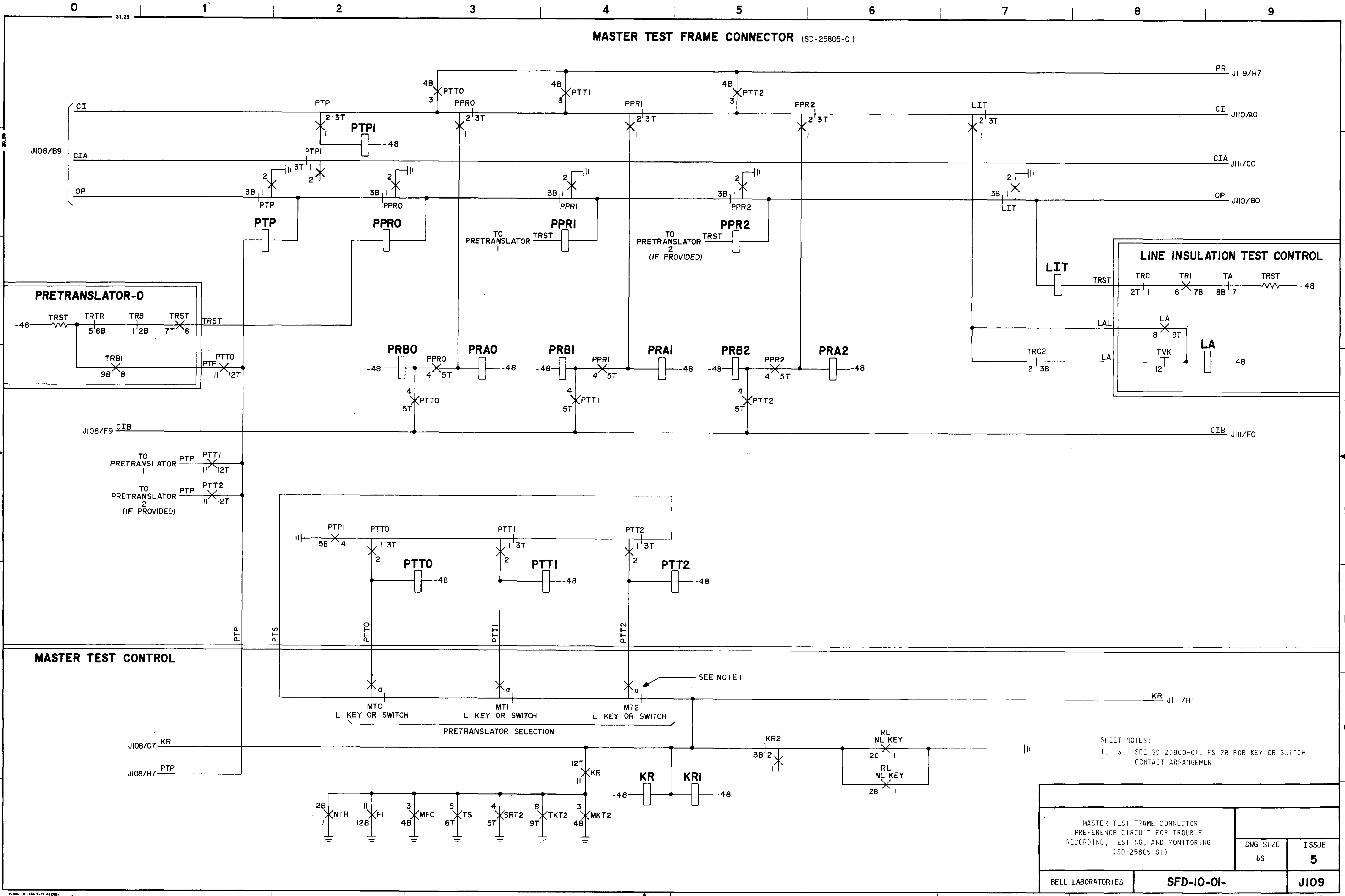
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

SHEET NOTES:

1. CM (0-7), RON CONTACTS 1-8.
   DTM (0-3), RON CONTACTS 9-12.
2. a - SEE SD-25800-01, FS7C FOR KEY OR SWITCH CONTACT ARRANGEMENT.
3. SEE OFFICE RECORDS FOR ASSIGNMENT OF MARKERS TO MT- KEY OR MTU- SWITCH POSITION.

SFD-10-01-J108



SHEET NOTES:

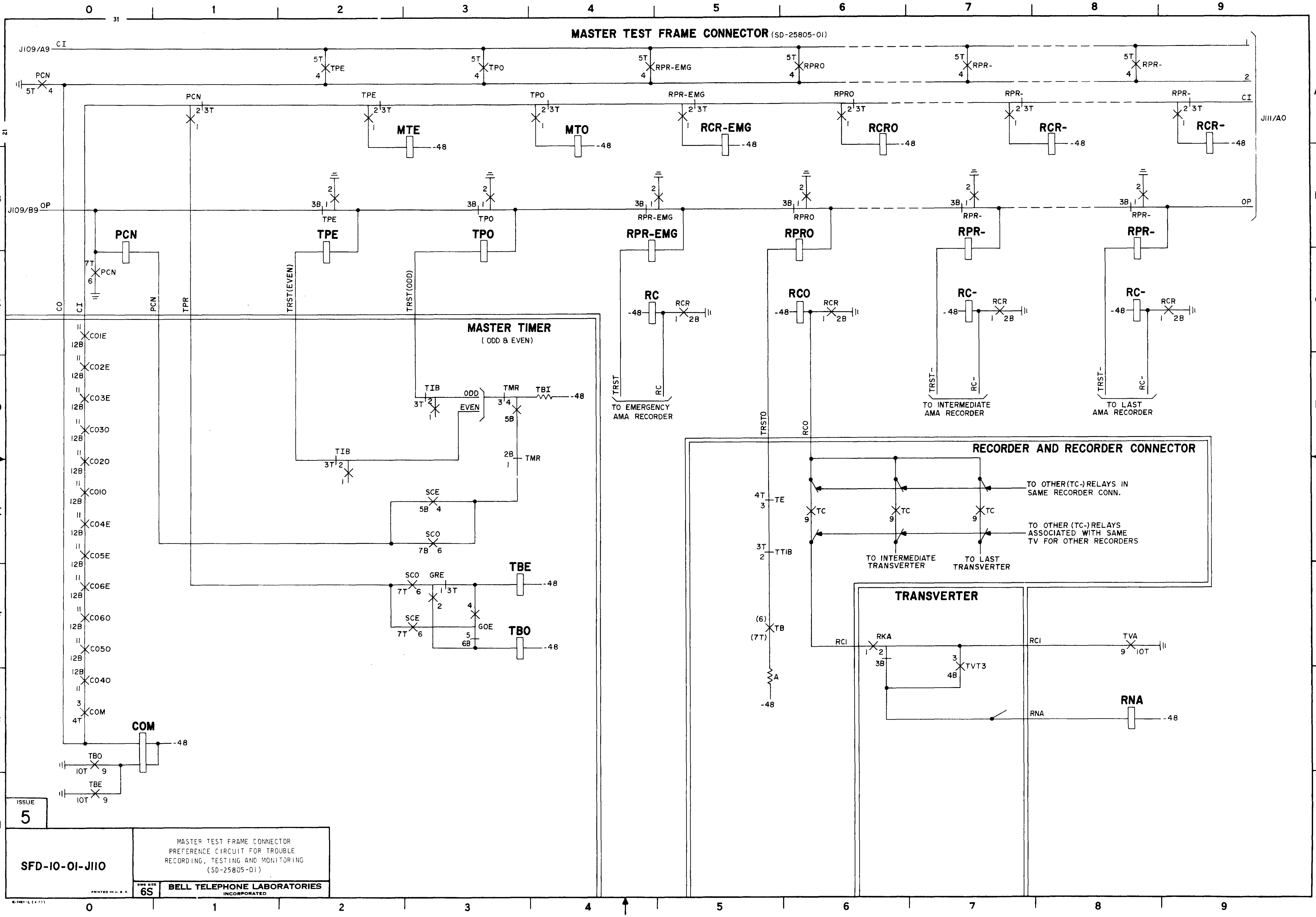
1. a. SEE SD-25800-01, FS 7B FOR KEY OR SWITCH CONTACT ARRANGEMENT

MASTER TEST FRAME CONNECTOR PREFERENCE CIRCUIT FOR TROUBLE RECORDING, TESTING, AND MONITORING (SD-25805-01)	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	J109

SFD-10-01-J109

K&E 19 1133 6-76 41290+

E-7421 (6-75) PRINTED IN U.S.A.


MASTER TEST FRAME CONNECTOR (SD-25805-01)
MASTER TIMER (ODD & EVEN)
RECORDER AND RECORDER CONNECTOR
TRANSVERTER
J109/A9
J109/B9
J111/A0
CI
CO
OP
PCN
TPE
TPO
RPR-EMG
RPRO
RPR-
MTE
MTO
RCR-EMG
RCRO
RCR-
RC
RCO
RC-
RCR
TPR
TRST(EVEN)
TRST(ODD)
TRST
TRSTO
TRST-
TO EMERGENCY AMA RECORDER
TO INTERMEDIATE AMA RECORDER
TO LAST AMA RECORDER
TIB
TMR
TBI
ODD
EVEN
SCE
SCO
GRE
GOE
TBE
TBO
COM
CO1E
CO2E
CO3E
CO3O
CO2O
CO1O
CO4E
CO5E
CO6E
CO6O
CO5O
CO4O
TE
TTIB
TB
A
TC
TO OTHER (TC-) RELAYS IN SAME RECORDER CONN.
TO OTHER (TC-) RELAYS ASSOCIATED WITH SAME TV FOR OTHER RECORDERS
TO INTERMEDIATE TRANSVERTER
TO LAST TRANSVERTER
RCI
RKA
TVT3
TVA
RNA
-48

ISSUE 5

SFD-10-01-J110

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND MONITORING
(SD-25805-01)

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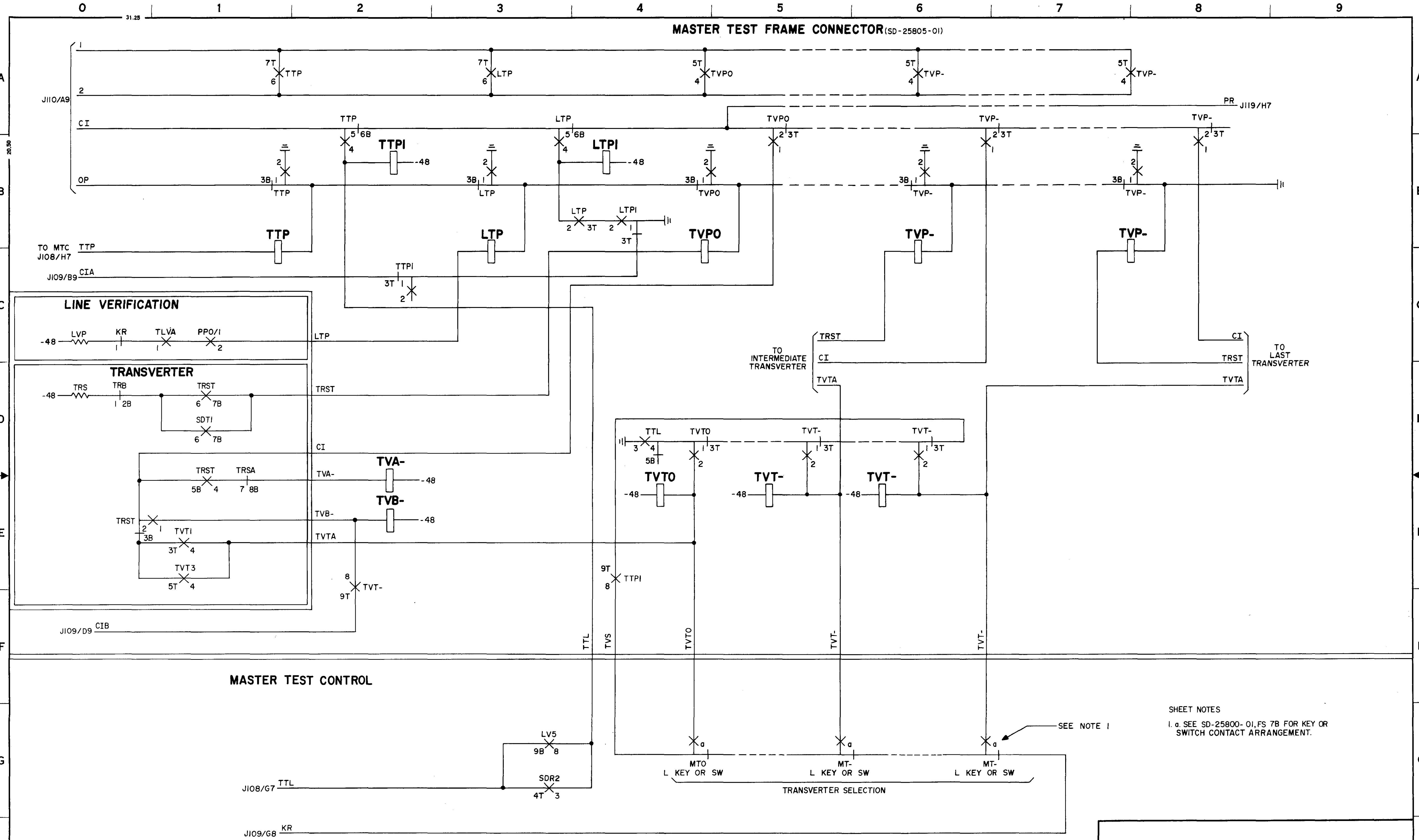
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-77)

SFD-10-01-J110



SHEET NOTES

1. a. SEE SD-25800-01, FS 7B FOR KEY OR SWITCH CONTACT ARRANGEMENT.

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND MONITORING
(SD-25805-01)

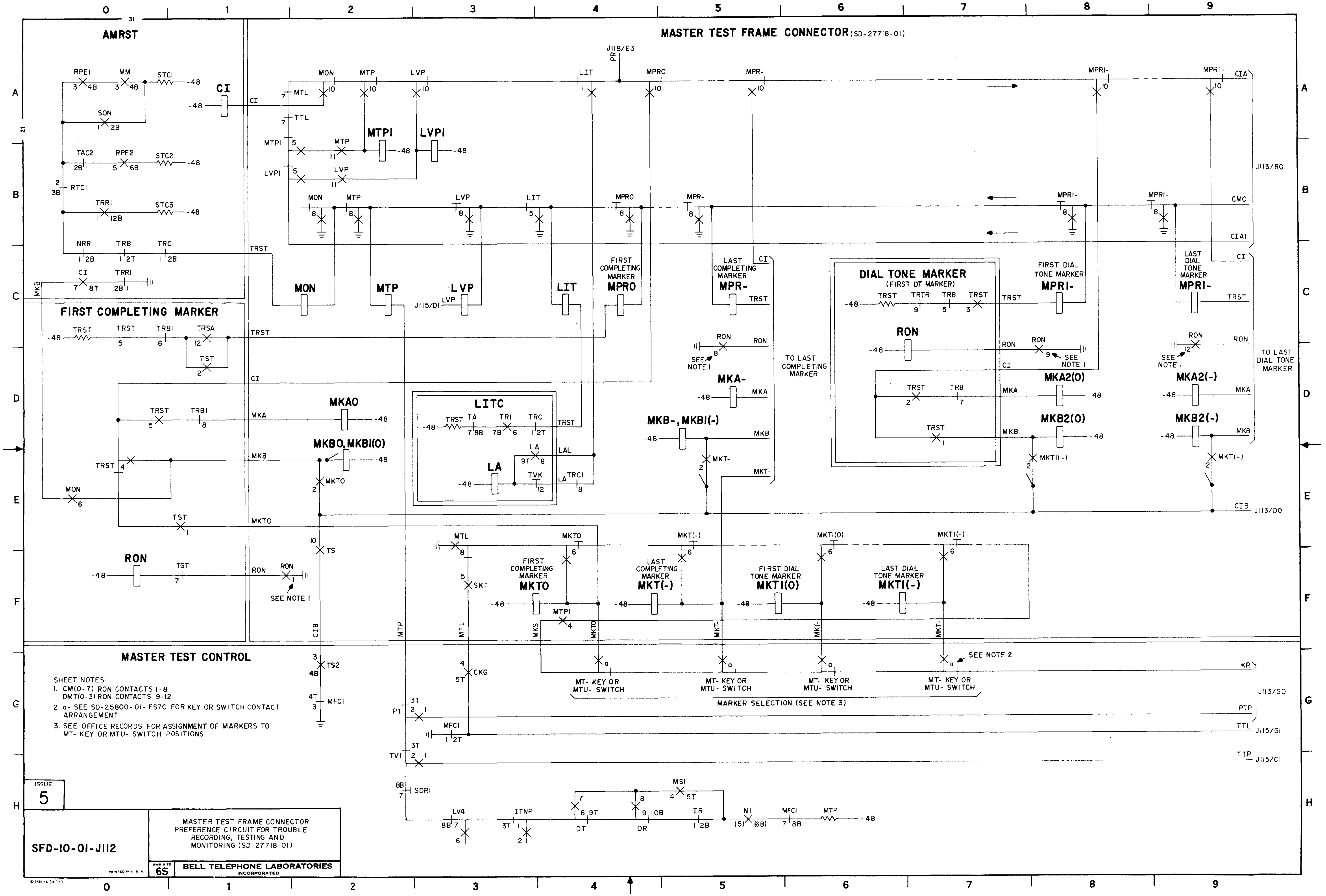
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- J111

SFD-10-01-J111

K&E 19 1153 6-76 41290+

E-7481 (6-75) PRINTED IN U.S.A.



SHEET NOTES:

1. CM(0-7) RON CONTACTS 1-8
   DMT(0-3) RON CONTACTS 9-12
2. a- SEE SD-25800-01-FS7C FOR KEY OR SWITCH CONTACT ARRANGEMENT
3. SEE OFFICE RECORDS FOR ASSIGNMENT OF MARKERS TO MT- KEY OR MTU- SWITCH POSITIONS.

ISSUE
5

SFD-10-01-J112

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND
MONITORING (SD-27718-01)

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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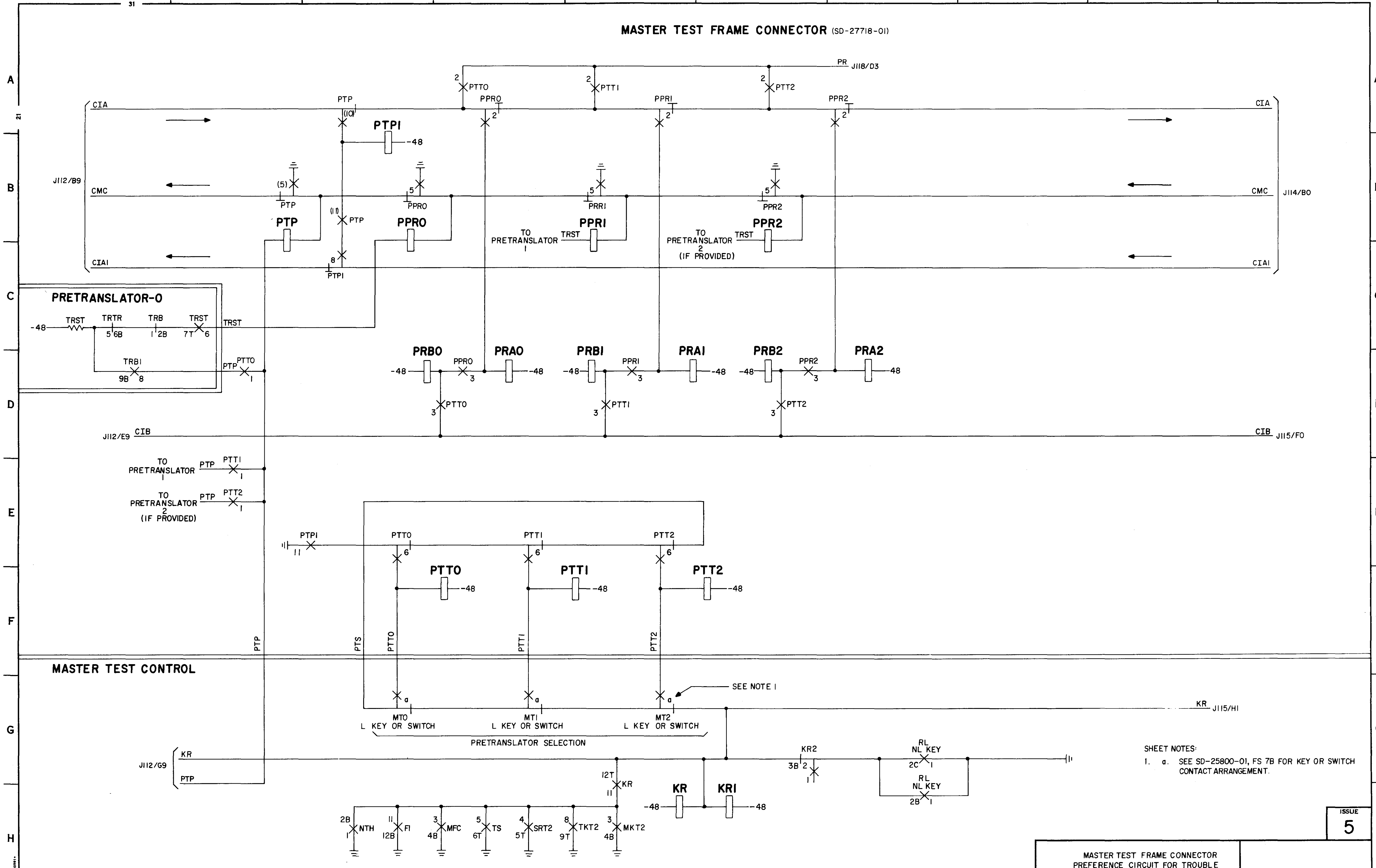
E-7481-L (4-71)

SFD-10-01-J112



SHEET NOTES:

1. a. SEE SD-25800-01, FS 7B FOR KEY OR SWITCH CONTACT ARRANGEMENT.

ISSUE 5

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND MONITORING
(SD-27718-01)

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

SFD-10-01-J113

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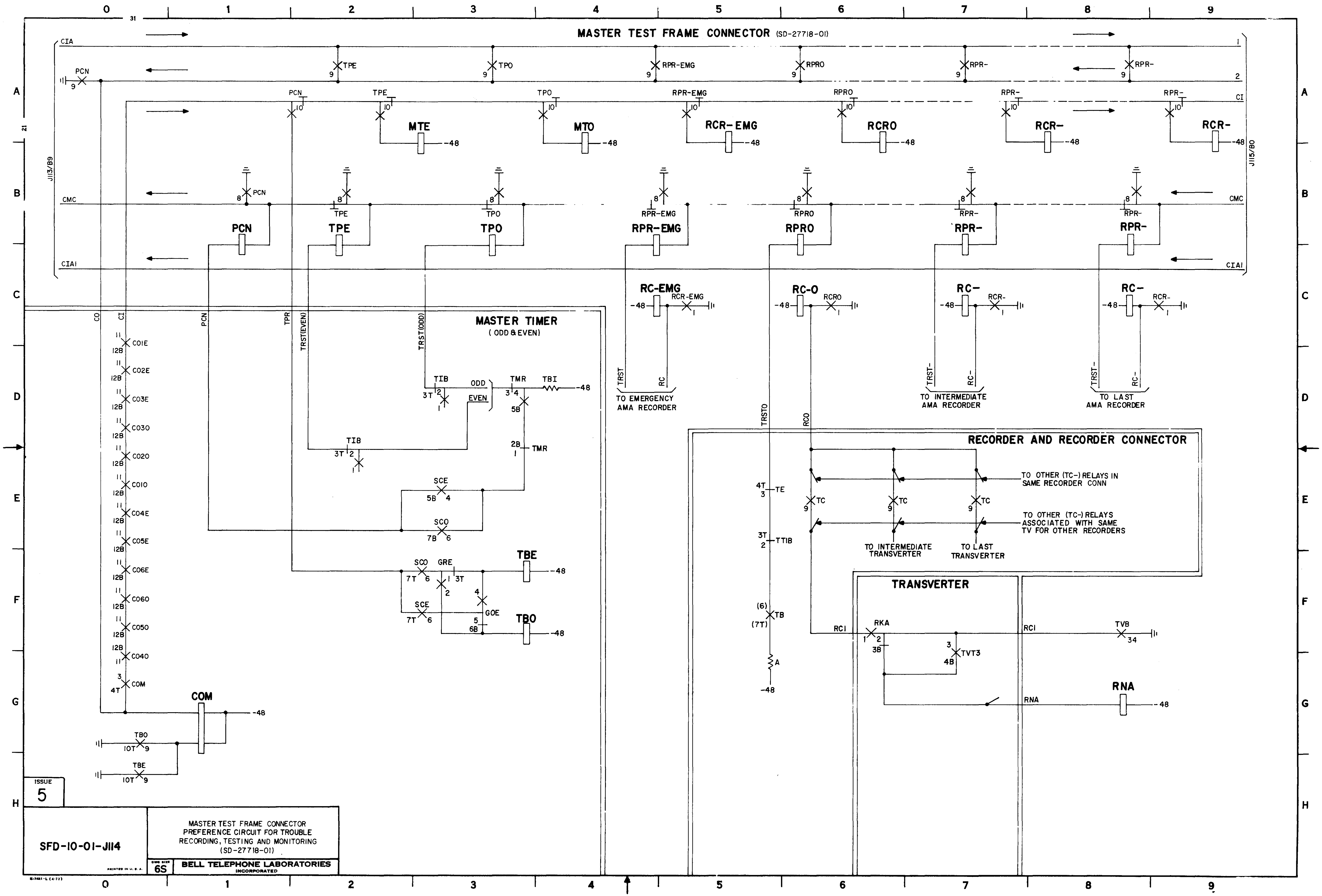

ISSUE
5

SFD-10-01-J114

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND MONITORING
(SD-27718-01)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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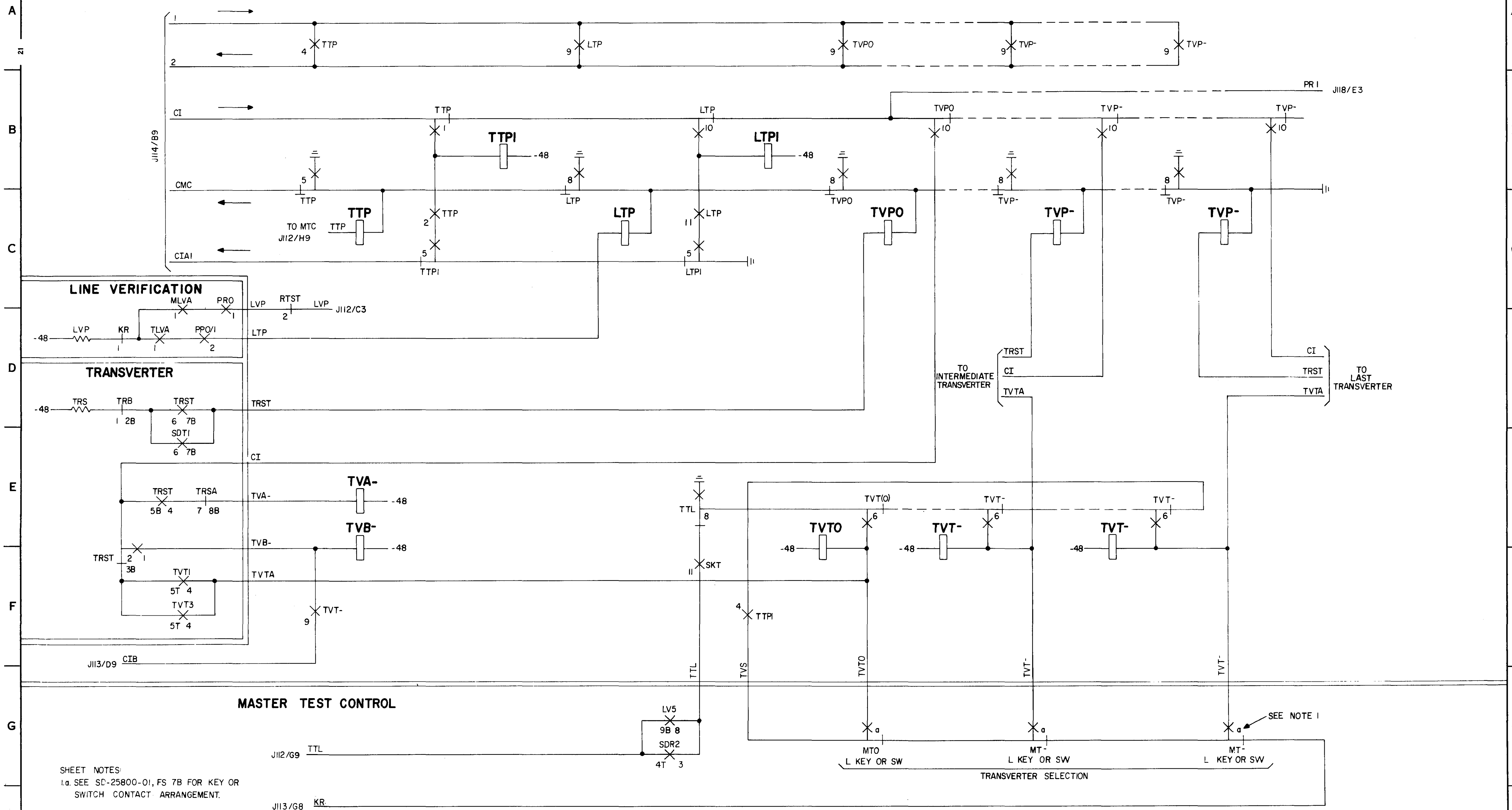
E-7481-L (4-72)

SFD-10-01-J114

MASTER TEST FRAME CONNECTOR (SD-27718-01)



SHEET NOTES:
1.a. SEE SD-25800-01, FS 7B FOR KEY OR SWITCH CONTACT ARRANGEMENT.

ISSUE
5

MASTER TEST FRAME CONNECTOR
PREFERENCE CIRCUIT FOR TROUBLE
RECORDING, TESTING AND MONITORING
(SD-27718-01)

SFD-10-01-J115

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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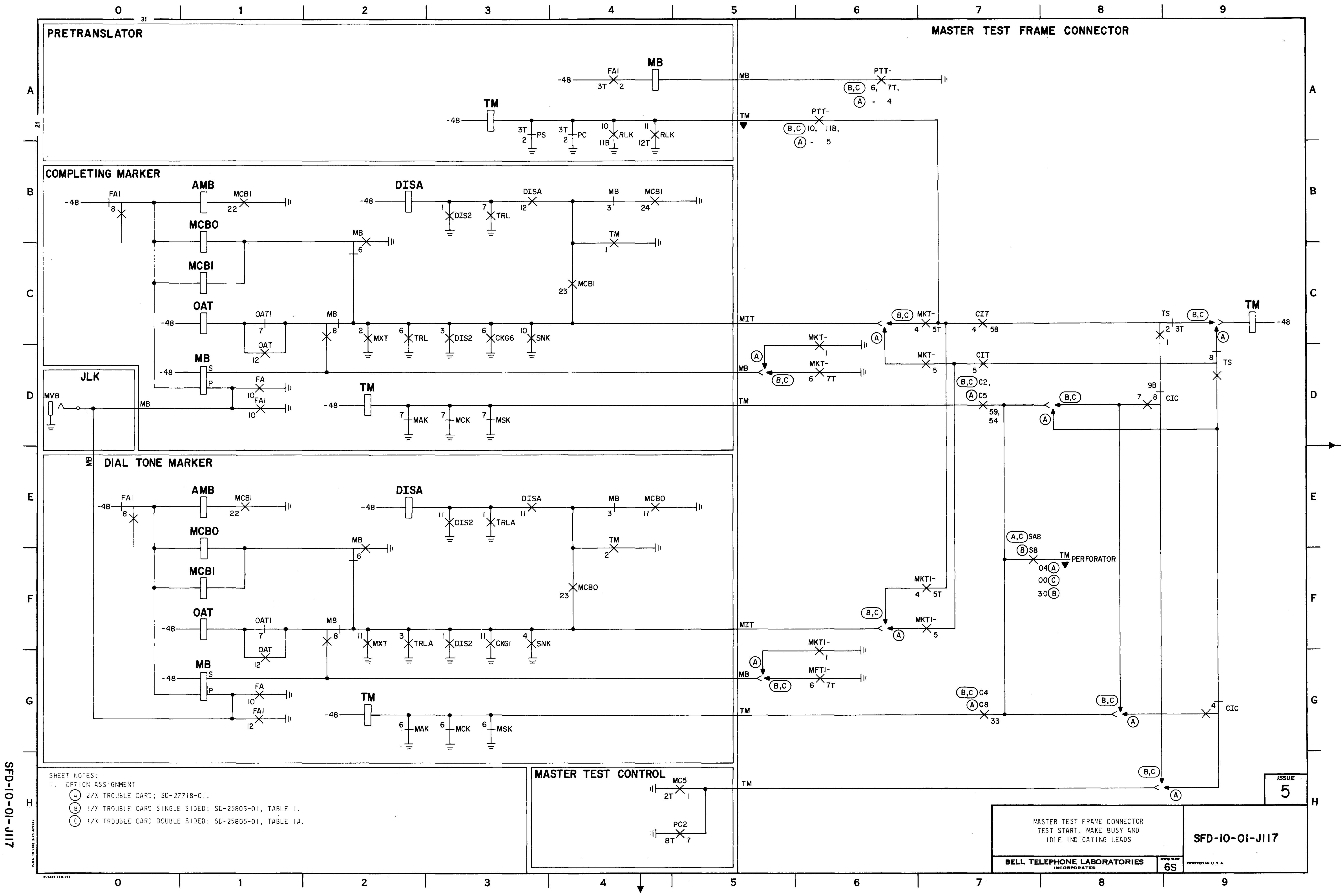

SHEET NOTES:

1. OPTION ASSIGNMENT
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

MASTER TEST FRAME CONNECTOR
TEST START, MAKE BUSY AND
IDLE INDICATING LEADS

SFD-10-01-J117

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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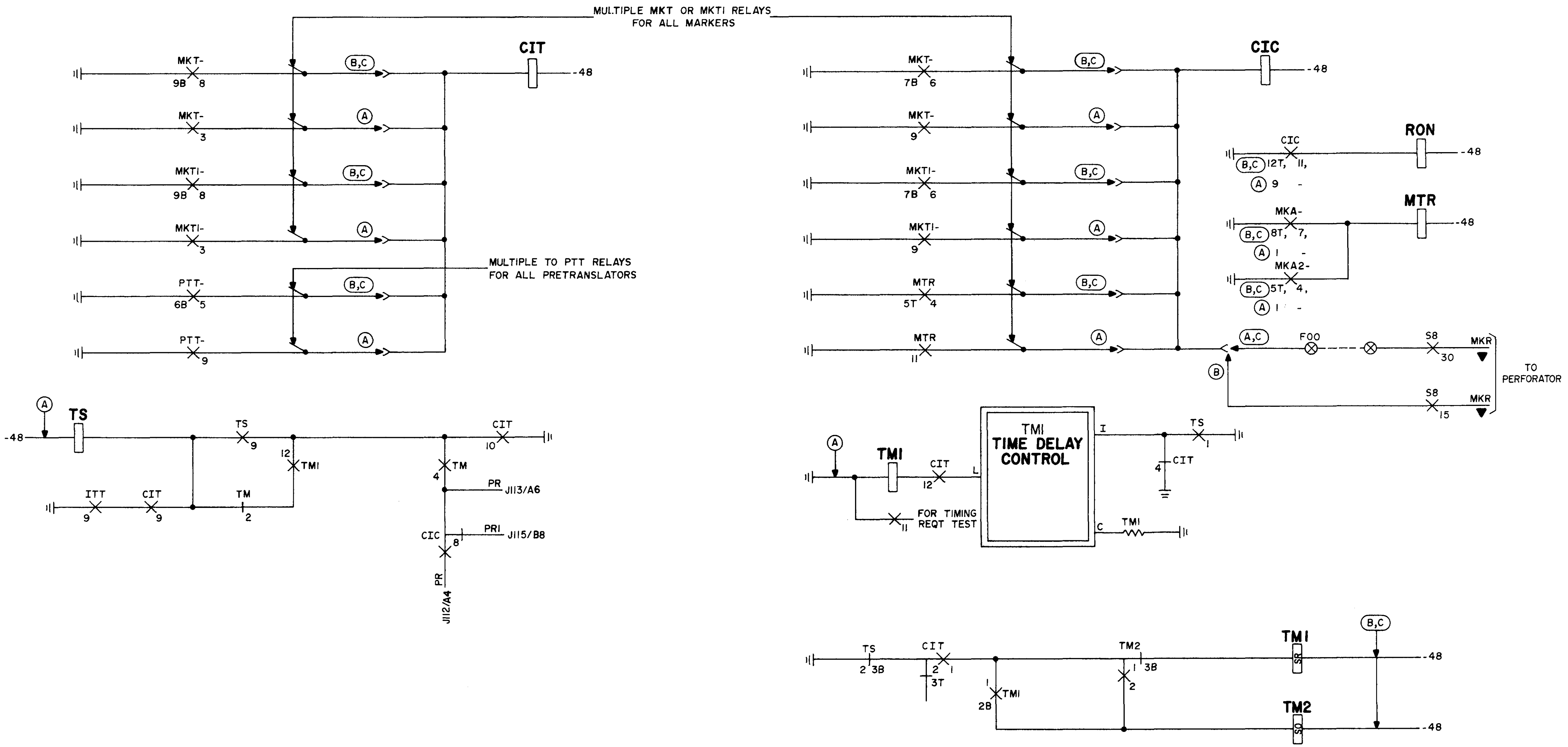
SFD-10-01-J117

K&E 19 1183 3-75 40991

E-7421 (10-71)

MASTER TEST FRAME CONNECTOR



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-J118

MASTER TEST FRAME CONNECTOR
MARKER, PRETRANSLATOR AND
TRANSVERTER SELECTION RELAYS

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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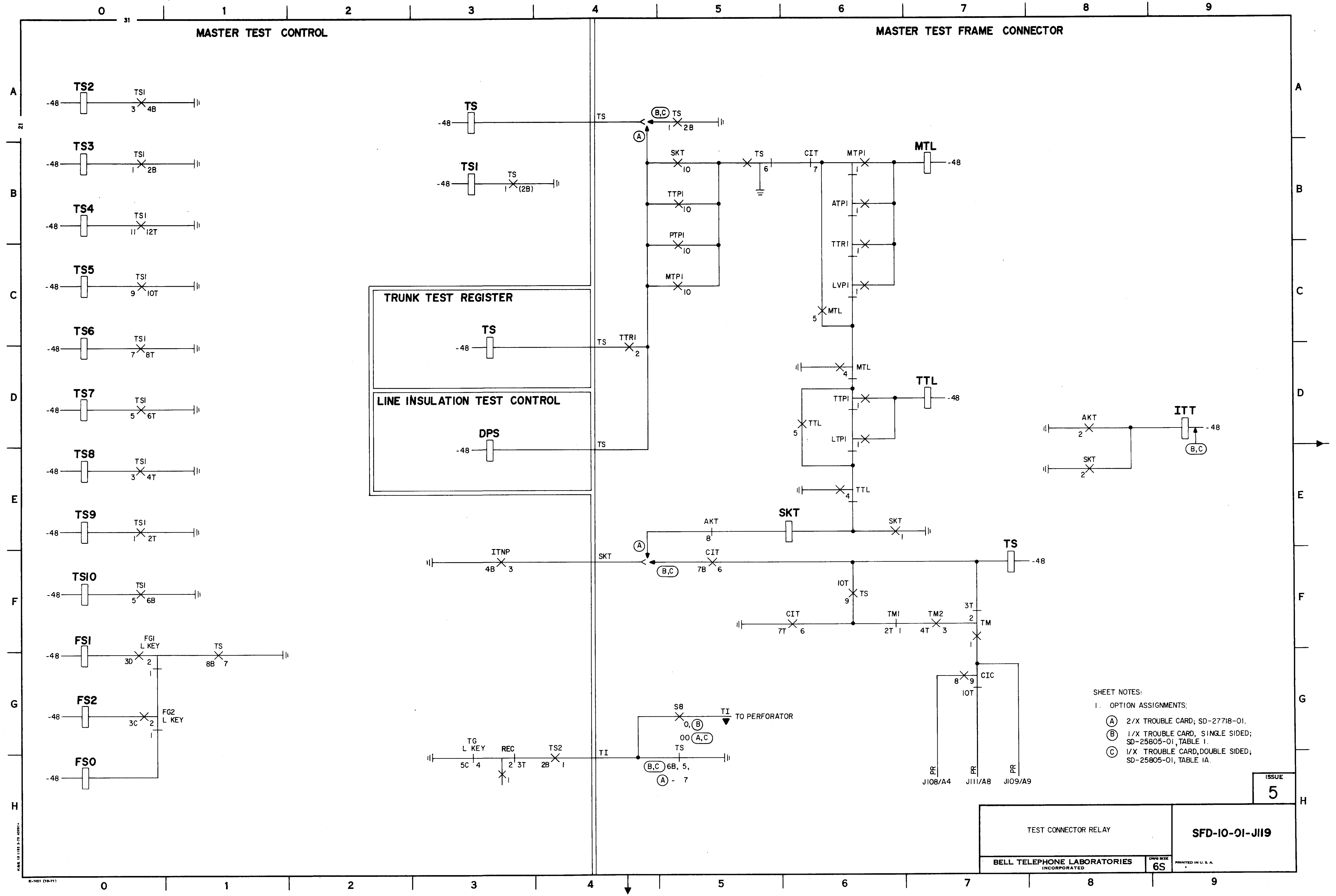
E-7481-L (4-73)

SFD-10-01-J118



SHEET NOTES:

1. OPTION ASSIGNMENTS;
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE 5

TEST CONNECTOR RELAY

SFD-10-01-J119

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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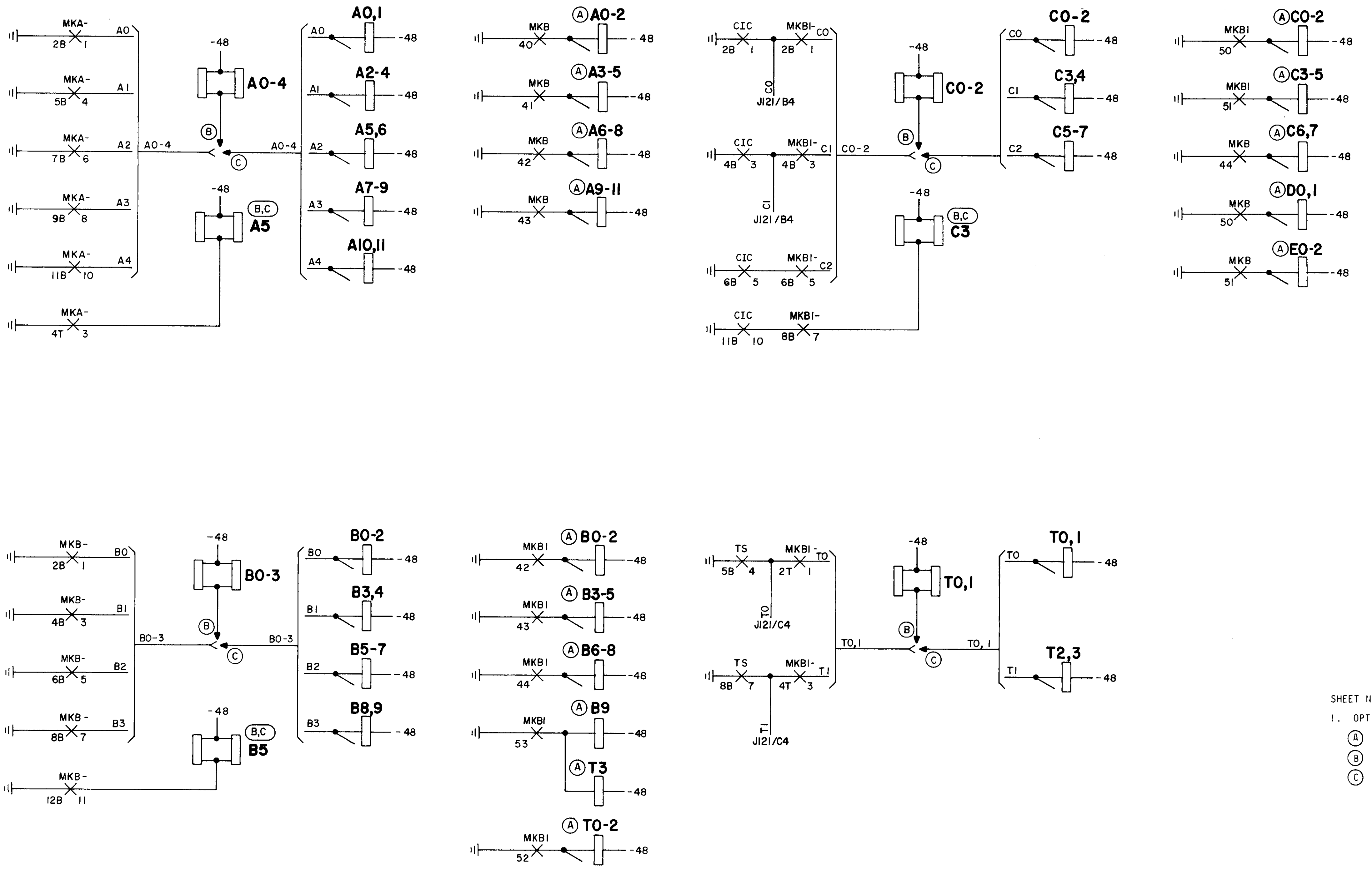
SFD-10-01-J119

MASTER TEST FRAME CONNECTOR



SHEET NOTES:

1. OPTION ASSIGNMENT:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-J120

MASTER TEST FRAME CONNECTOR
CONNECTOR RELAYS
(COMPLETING MARKER)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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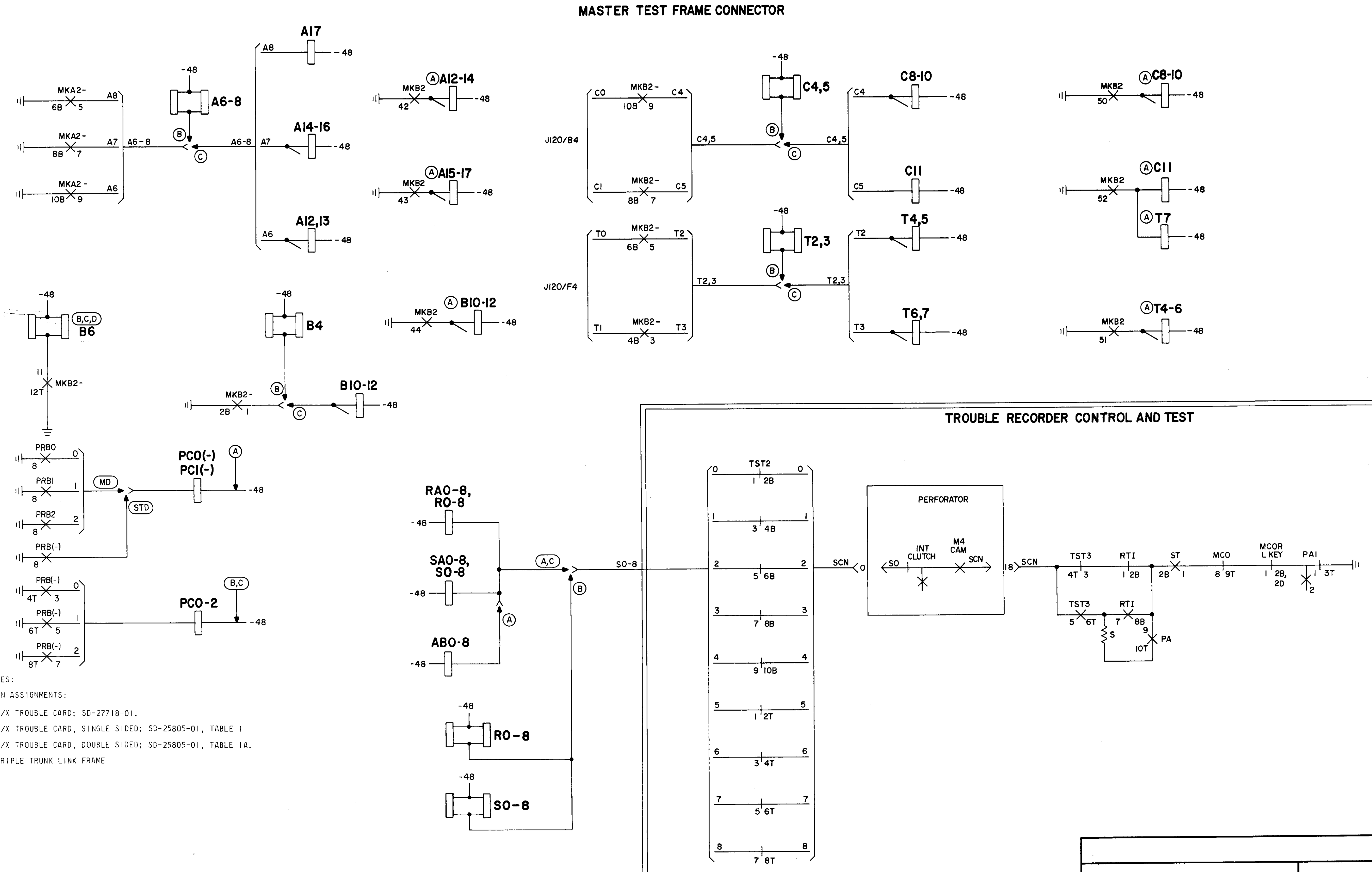
E-7481-L (4-73)



SHEET NOTES:

1. OPTION ASSIGNMENTS:

   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A.
   - Ⓓ TRIPLE TRUNK LINK FRAME

MASTER TEST FRAME CONNECTOR
CONNECTOR RELAYS
(DIAL TONE MARKER AND PRETRANSLATOR)

	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	J121

E-7421 (6-75)
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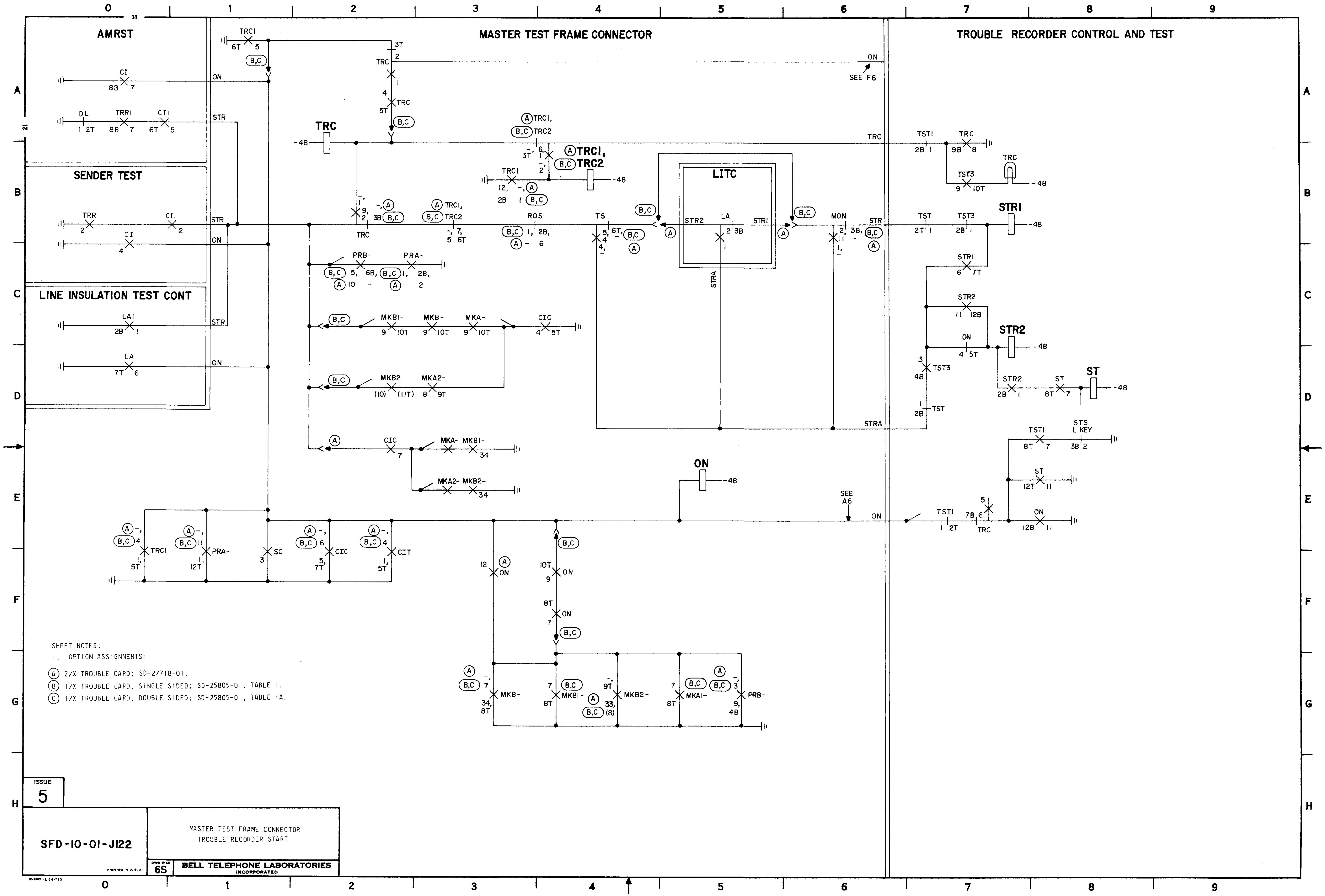

SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-J122

MASTER TEST FRAME CONNECTOR
TROUBLE RECORDER START

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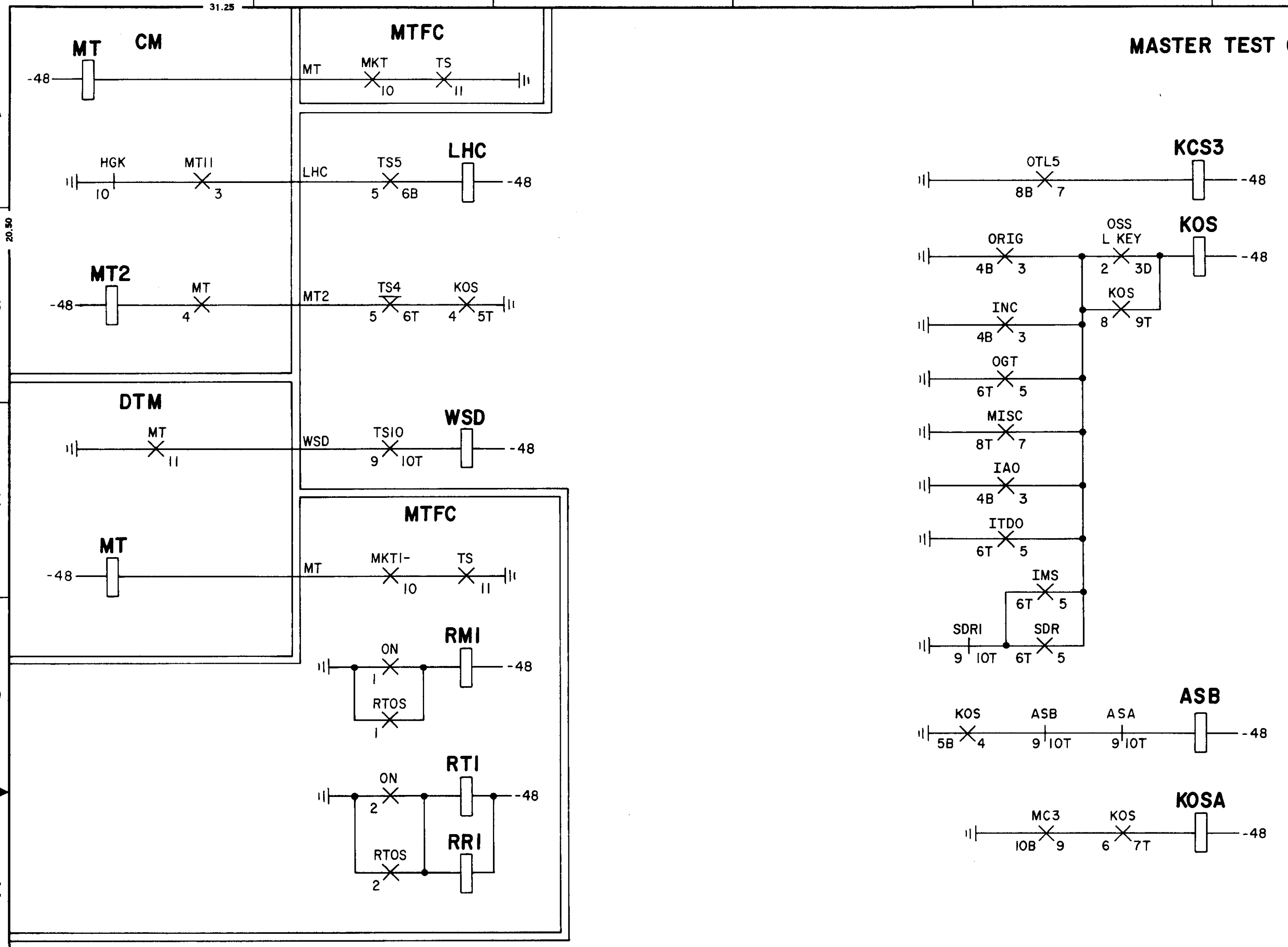
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-J122

MASTER TEST CONTROL



SHEET NOTES:
I. OPTION ASSIGNMENTS:

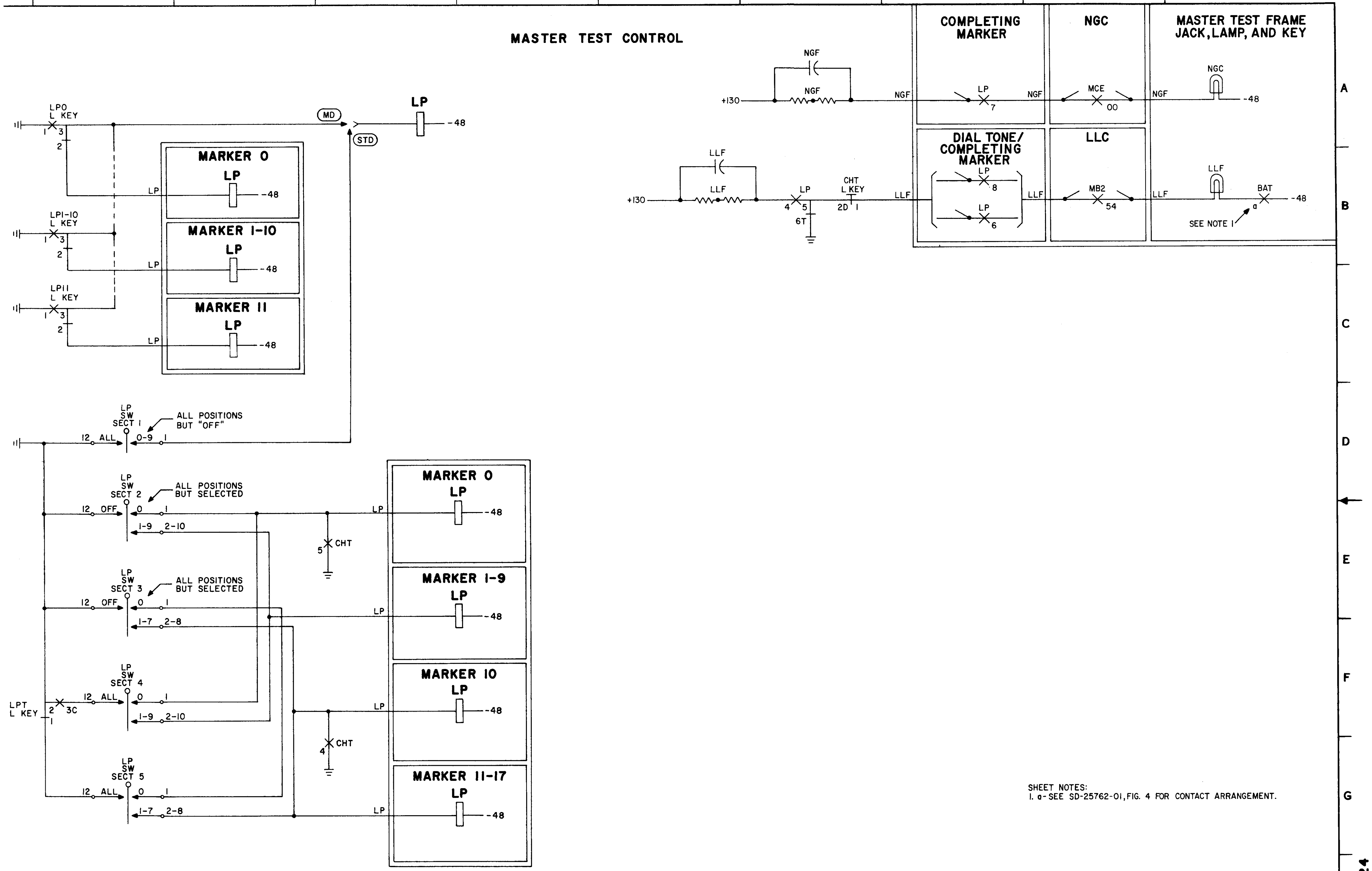
Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ I/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE I

Ⓒ I/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE IA

MASTER TEST CONTROL PREFERENCE	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	J123

MASTER TEST CONTROL



SHEET NOTES:
1. a- SEE SD-25762-01, FIG. 4 FOR CONTACT ARRANGEMENT.

ISSUE
5

SFD-10-01-J124

PROGRESS AND IDENTIFICATION
LAMP CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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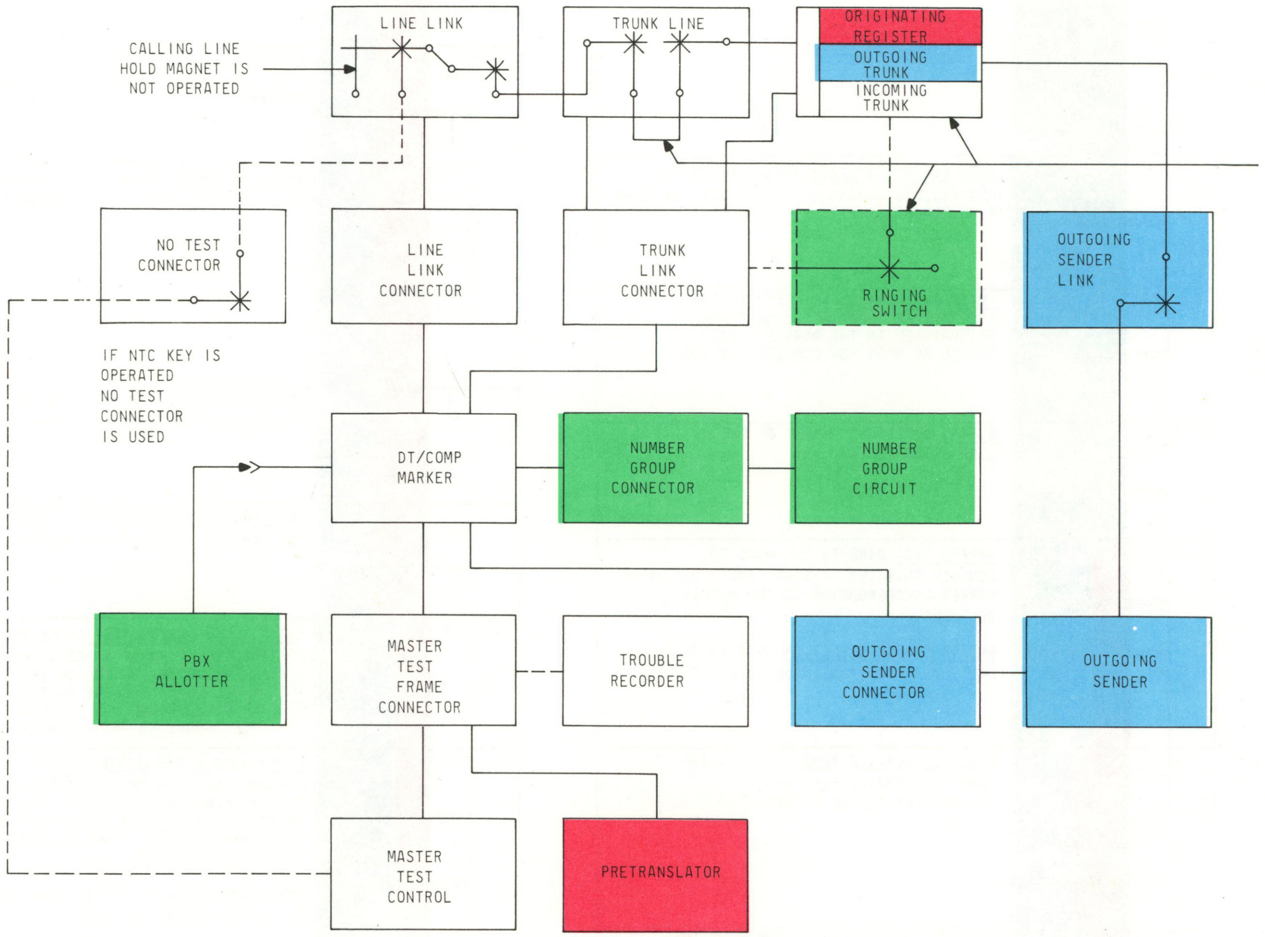
SFD-10-01-J124



FUNCTION OF INCOMING TRUNK RINGING SWITCH AND CLOSURE OF THE TRUNK LINK CROSSPOINTS ARE SIMULATED IN MTC ON "INC" CLASS OF MARKER TEST.

☐ CONNECTION COMMON TO DT/ORIG/INC CLASS OF MARKER TEST.

🟥 CONNECTION ASSOCIATED WITH "DT" CLASS OF MARKER TEST OR PTT CLASS OF TEST.

🟦 CONNECTION ASSOCIATED WITH "ORIG" CLASS OF MARKER TEST.

🟩 CONNECTION ASSOCIATED WITH "INC" CLASS OF MARKER TEST.

INDEX

PAGE NO.	TITLE
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K002	MTC KEYS AND/OR SWITCHES MARKER/PRETRANSLATOR CLASS OF TESTS
K003	MTC KEYS AND/OR SWITCHES MARKER/PRETRANSLATOR CLASS OF TESTS
K004	FLOW CHART - MARKER TIMING (DT CLASS)
K005	FLOW CHART - MARKER TIMING (ORIG CLASS)
K006	FLOW CHART - MARKER TIMING (INC CLASS)
K007	TROUBLE ANALYSIS SEQUENCE CHART - (DT CLASS)
K008	TROUBLE ANALYSIS SEQUENCE CHART - (ORIG CLASS)
K009	TROUBLE ANALYSIS SEQUENCE CHART - (INC CLASS)

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

SFD-10-01-K001
4 SHEETS, SHEET 1

ISSUE
5

PART KO
INDEX- BLOCK DIAGRAM
MARKER/PRETRANSLATOR CLASS OF TESTS

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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SFD-10-01-K001

EQUIPMENT OR FEATURE TO BE TESTED (SEE NOTE 4)	B.S.P.	TEST
DIAL TONE MARKER-ALL TEST	218-120-501	-
PRETRANSLATOR-ALL TEST	218-130-501	-
COMPLETING MARKER-ORIGINATING	218-271-501	-
COMPLETING MARKER-OTHER TEST	218-122-501	A-D
	218-122-502	E,F
	218-122-503	J-N
	218-122-504	O-Q,S
	218-122-505	T-Y
	218-122-506	AA-AD
	218-122-507	AE-AG
	218-122-507	AI-AJ
	218-122-508	AL,AK
	218-122-508	AN,AP
	218-122-509	AQ,AT-AU
	218-122-510	AW-AZ
	218-122-511	BA-BC
	218-122-512	BF-BH
	218-122-513	BK-BM
	218-122-514	BN
	218-122-515	BO-BQ
	218-122-522	CH
	218-122-526	CT
	218-122-528	CX
	218-122-550	A-G

SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	67	🟥 DT KEY	DIAL TONE CLASS OF TEST SIMULATES SEIZURE OF DTM BY LINE LINK FRAME USING MTC AND MTFC CIRCUIT.
	74	🟥 TSTA SW (DT)	
1	72	🟥 PTT KEY	PRETRANSLATOR TEST PREPARES TEST CIRCUIT FOR MAKING TEST OF PRETRANSLATOR.
	74	🟥 TSTA SW (PTT)	
1,2	G	🟥 MF/MLF KEY (OPR/N-OPR)	ORIGINATING REGISTER GROUP WHEN THE LLF SERVES ONLY MULTIFREQUENCY ORIGINATING REGISTERS OPERATE TO MF. IF LLF SERVES BOTH MULTIFREQUENCY AND DIAL PULSE ORIGINATING REGISTERS OPERATE TO MLF. FOR LLF SERVING DIAL PULSE ORIGINATING REGISTERS MF/MLF KEY SHOULD BE NORMAL OR RG SWITCH OPERATED TO DP.
	124	🟥 RG SW (DP/MF/MLF)	
1	67	🟦 ORIG KEY	ORIGINATING ALLOWS TESTING A MARKER USING AN ORIGINATING CLASS OF CALL.
	74	🟦 TSTA SW (ORIG)	
1,2	17, WX	🟦 ORIG KEY	ORIGINATING/FOREIGN AREA CLASS WITH THE FACD KEY NORMAL OR THE CL SWITCH OPERATED TO OR-DP/MF, INDICATES A HOME OFFICE CODE. WITH THE FACD KEY OR CL SWITCH OPERATED TO FAC-DP/MF, INDICATES A FOREIGN AREA CODE
	11, NQ	🟦 CL SW (OR-DP/MF/FAC-DP/MF)	
	WW	🟦 NONE	
1,2	11, OX	🟦 2DTO KEY	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME MARKER WITH NECESSARY ORIGINATING TRANSLATION FOR SELECTED ROUTE.
	17, NP	🟦 11/X11 KEY	
	17, SX	🟦 LT1 KEY	
	17, PH	🟦 LT2 KEY	
	11, EC	🟦 FVDO KEY	
	11, OY	🟦 LT3 KEY	
	NT, OW	🟦 LOC TRNSL (ALL KEYS NORMAL)	
	11, NQ	🟦 TRNA SW (LT/LT1/LT2/LT3/2DT/X11/11/FVD)	
1,2	4, KX	🟦 A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH A THREE DIGIT AREA CODE OR THREE DIGIT OFFICE CODE.
	4, ZVL	🟦 A-C SW (0-9)	
1,2	4, KX	🟦 D(0-9) KEY	CALLED DIGITS (D-K) PRIMES THE MARKER WITH THE CALLED DIGITS.
	4, KY	🟦 E(0-9) KEY	
	4, KZ	🟦 F(0-9) KEY	
	4, JA	🟦 G(0-9) KEY	
	4, JB	🟦 H(0-9) KEY	
	4, JC	🟦 J(0-9) KEY	
	4, JD	🟦 K(0-9) KEY	
	4, ZVL	🟦 D-K SW (0-9)	

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	67	🟩 INC SW	INCOMING TEST CAUSES THE TEST CIRCUIT TO CONNECT TO THE MARKER UNDER TEST THROUGH MTFC AND TO SIMULATE SEIZURE OF THE MARKER BY AN INCOMING REGISTER.
	74	🟩 TSTA SW (INC)	
1,2	11, ZVP	🟩 IC KEY (OA/OB/AB)	INCOMING CLASS OPERATED CONTROLS THE INCOMING CLASS TRANSMITTED TO THE MARKER.
	11, CY	🟩 IC SW (OA/OB/AB)	
	NQ	🟩 TRNB SW (OA/OB/FVD)	
		🟩 ICL SW (INC)	
1	ZYZ	🟩 TCB KEY (OPR/N-OPR)	TRUNK CLASS AUXILIARY KEYS TCA/TCB USED IF OFFICE IS ARRANGED FOR TAN,TOL, OR CAMA TRUNK CLASSES.
		🟩 CL SW (TCA/TCB)	
1,2	WL, WK	🟩 ITC (0-9) KEY	INCOMING TRUNK CLASS OPERATED TO CONTROL THE INCOMING TRUNK CLASS TRANSMITTED TO THE MARKER. SEE OFFICE RECORDS FOR CORRECT SETTING.
	JF	🟩 ITC SW (0-9)	
1,2	4, KX	🟩 A-E (0-9) KEY	DIGITS DIRECTORY NUMBER OF THE LINE BEING TESTED.
	4, ZVL	🟩 A-E SW (0-9)	
1,2	19, 21	🟥🟦🟩 MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED. PRETRANSLATOR SELECTION USED TO SELECT PARTICULAR PRETRANSLATOR TO BE TESTED.
	52	🟥🟦🟩 MT SW (0-11)	
	81	🟥🟦🟩 MTU SW (0-9)	
		🟥🟦🟩 MTT1 KEY	
1,2	7,XA, XB,ZG	🟥🟦 CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	🟥🟦 CST (0-9) KEY	
	7,JF	🟥🟦 CST SW (0-9)	
1,2	7,JH, RY	🟥🟦 CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	🟥🟦 CSU SW (0-9)	
1,2	37, GC,GD	🟥🟦 CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		🟥🟦 NONE	
1,2	7,JI	🟥🟦 CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	🟥🟦 CRU SW (0-9)	
		🟥🟦 NONE	NO RATE TREATMENT REQUIRED

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1,2	7,ED	🟥🟦 CSGA/CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER
		🟥🟦 NONE	NO RATE TREATMENT REQUIRED
1,2	FIG. S	🟥🟦 FT (0-3) KEY	FRAME TENS OPERATED TO TRANSMIT THE LINE LINK FRAME TENS DIGIT TO THE MARKER.
	FIG. T	🟥🟦 FT (0-5) KEY	
	78	🟥🟦 FT SW (0-5)	
1,2	6, KX	🟥🟦 FU (0-9) KEY	FRAME UNITS OPERATED TO TRANSMIT THE LINE LINK FRAME UNITS DIGIT TO THE MARKER.
	6,ZWP, ZWQ	🟥🟦 FU SW (0-9)	
1,2	6, KX	🟥🟦 VG (0-9) KEY	VERTICAL GROUP OPERATED TO TRANSMIT THE VERTICAL GROUP TO THE MARKER.
	6, ZF	🟥🟦 VG (10-13) KEY	
	6, JF	🟥🟦 VGU SW (0-9)	
		🟥🟦 VGT1 KEY	
1,2	6, KX	🟥🟦 HG (0-9) KEY	HORIZONTAL GROUP OPERATED TO TRANSMIT THE HORIZONTAL GROUP TO THE MARKER.
	6, JF	🟥🟦 HG SW (0-9)	
1,2	6, RD	🟥🟦 VF (0-4) KEY	VERTICAL FILE OPERATED TO TRANSMIT THE VERTICAL FILE TO THE MARKER.
	6, JF	🟥🟦 VF SW (0-4)	
2	9	🟥🟦🟩 FS/NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEYS OR SWITCH, WITH (FS KEY) OR WITHOUT (NTFS KEY), FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	🟥🟦🟩 FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS (0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER. (ON DT CLASS THESE KEYS ARE VARIABLE)
	79	🟥🟦🟩 FG (0-2) KEY	
	80	🟥🟦🟩 FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
2	U, 79	🟥🟦🟩 FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) ON FG(0-2) KEYS LOOK BUSY.
	80	🟥🟦🟩 FS SW (0-9)	
1	1	🟥🟦🟩 ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
2	10	🟥🟦🟩 STP1/STP2 KEY	JUNCTOR SEQUENCE STEP WITH STP1 KEY OPERATED, ALLOWS MARKER TO MAKE CHANNEL SELECTION IN JUNCTOR GROUP STEP 1, BUT IF NO CHANNEL IS AVAILABLE AND MARKER ADVANCES TO STEP 2, MAKES ALL CHANNELS LOOK BUSY. WITH STP2 KEY OPERATED, MAKES ALL CHANNELS LOOK BUSY IN JUNCTOR STEP 1, CAUSING MARKER TO ADVANCE TO STEP 2 WHERE IT IS ALLOWED TO MAKE CHANNEL SELECTION.

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM MARKER OR PRETRANSLATOR TESTS.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS.
4. REFERENCE TO BSP SECTIONS FOR MARKER AND PRETRANSLATOR TESTS AS SHOWN IN SFD SECTION J.
5. COLOR CODE TO TYPE OF TEST:

🟥	DT CLASS OF MARKER TEST/PRETRANSLATOR CLASS OF TEST
🟦	ORIG CLASS OF MARKER TEST
🟩	INC CLASS OF MARKER TEST

ISSUE
5

SFD-10-01-K002

MTC KEYS AND/OR SWITCHES
MARKER & PRETRANSLATOR CLASS OF TESTS

PRINTED IN U. S. A.
DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-73)

SFD-10-01-K002
4 SHEETS, SHEET 1

SD-25800-01

SEE NOTE	FIG. OR APP	KEY OR SWITCH	FUNCTION
2	10, FS, FT	CH (0-9) KEY	CHANNEL BLANKS OUT ALL BUT THE DESIRED CHANNEL.
	10, EA	CH SW (0-9)	
2	10, KX	JSQ (0-5) KEY	JUNCTOR SEQUENCE RESETS THE JUNCTOR SEQUENCE WALKING RELAYS OF THE MARKER TO A DESIRED WALKING POSITION.
	10, JF	JSQ (0-5) SW	
3	1	REC KEY	RECORD CAUSES MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING
3	15, ZL	TCT KEY	TEST CONTINUITY TUBE CONTROLS THE TEST APPLIED TO THE MARKER VACUUM TUBES IN THE CONTINUITY TEST FEATURE SO THAT THIS MAY BE LIMITED AS TO RINGING VOLTAGE.
3	15, ZM	LGT KEY	LOOP GROUND TEST KEY NORMAL, CAUSES GROUND TEST TO BE APPLIED TO THE TIP. LGT KEY OPERATED, CAUSES GROUND TEST TO BE APPLIED BY LOOPING THE TIP AND RING.
3	15	CON/ RV KEY	CONTINUITY/REVERSE CON KEY OPERATED, APPLIES A LOOP CONTINUITY TEST TO THE MARKER CON TUBE. WITH THE RV KEY OPERATED. TRANSFERS THE CONTINUITY TEST FEATURE FROM THE RING TO THE TIP.
3	15	GT/ FCG KEY	GROUND TEST/FALSE CROSS AND GROUND OPERATED TO GT APPLIES A HOLD TEST TO THE MARKER GT RELAY. NORMAL APPLIES A RELEASE TEST TO THE MARKER GT RELAYS. FCG APPLIES AN OPERATE TEST TO THE MARKER FCG RELAY.
3	15	LB/ XLH KEY	LINE BUSY/CROSSED LINE HOLD MAGNET WITH LB KEY OPERATED, MAKES ANY LINE APPEAR BUSY TO MARKER BY CAUSING THE LHMT LEAD TO BE GROUNDED UPON RECEIVING A GROUND FROM THE MARKER ON THE HGK LEAD. XLH KEY OPERATED, SHUNTS THE LHM RELAY WITH 3000-OHMS TO SIMULATE A CONDITION SIMILAR TO CROSSED-LINE HOLD MAGNETS.
3	15	LBL KEY	LINE BUSY AT LINE LINK LBL KEY OPERATED, MAKES ANY LINE APPEAR BUSY TO THE MARKER BY CAUSING THE LHMT LEAD TO BE GROUNDED TO THE MARKER UPON RECEIVING A GROUND ON THE HGK LEAD.
3	1, ZWB, ZWC	TR2/ TRS KEY	SECOND TRIAL/TRANSFER START WITH KEY NORMAL SIGNALS MARKER OR PRETRANSLATOR TO FUNCTION ON A FIRST TRIAL BASIS. WHEN OPERATED, TR2 KEY SIGNALS MARKER OR PRETRANSLATOR TO FUNCTION ON A SECOND TRIAL BASIS. TRS KEY OPERATED, SIGNALS THE MARKER OR PRETRANSLATOR THAT THERE WAS A CONNECTOR START TRANSFER.
3	14	NTC KEY	NO TEST CONNECTOR CAUSES THE MARKER TO USE A NO TEST VERTICAL AS THE ORIGINATING LINE FOR THE TEST.
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO- TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0-19) KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED, WILL OPERATE THE "TST" RELAY IN THE TLF WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME.
2	9, KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-19) KEY LOOK BUSY TO THE MARKER.
	9, JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS TS(0-19) KEY.
		TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
3	7, WR	HTR/ TC KEY	HEAVY TRAFFIC/TEST CONTINUITY. HTR SIGNALS MARKER TO FUNCTION ON A HEAVY TRAFFIC BASIS. WITH TC KEY OPERATED, APPLIES A POSITIVE POLARITY AS THE DC COMPONENT OF THE CURRENT FLOW TEST OF THE MARKER CONTINUITY FEATURE. KEY NORMAL, APPLIES A NEGATIVE DC COMPONENT.
3	129, ZQY, ZQO	OBS KEY	OBSERVE GROUNDS THE OBST LEAD INSTEAD OF NOBT TO SIMULATE. AN ORIGINATING REGISTER ON AN OBSERVED CALL.
3	15	FCG KEY	FALSE CROSS AND GROUND APPLIES AN OPERATE TEST TO THE MARKER FCG RELAY
2	9, QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9, QF	RA SW (0-5)	
	9, IB	RA SW (0-11)	
	9, CG	RAU SW (0-9)	
	9/99, DL	RATI KEY	
2	50	RT(0-3) KEY	ORIGINATING REGISTER GROUP SIGNALS THE MARKER TO ESTABLISH A CONNECTION TO A PARTICULAR REGISTER GROUP.
	124	RG SW (RTO/RTI/RT2) RT3/VPO/VPI/ VP2)	
3	9	AN KEY	OVERLOAD ANNOUNCEMENT OPERATED WITH RA KEY OR RAU SWITCH AND ENABLES THE DIAL TONE MARKER TO RECYCLE AND SET UP THE CALL TO AN OVERLOAD ANNOUNCEMENT TRUNK.
3	4	P & LO KEY	PREFERENCE AND LOCKOUT TESTS THE PREFERENCE AND LOCKOUT FEATURE OF DTM BY PROVIDING DOUBLE LINE LOCATION INFORMATION.
3	17, US, VM	TOBS KEY	TRUNK OBSERVING PROVIDES PATH FOR OPERATING TOBS RELAY MARKER.
3	17,	FAD/ HFA KEY	FOREIGN AREA DIALED/HOME AND FOREIGN AREA EFFECTIVE WHEN TOBS KEY OPERATED. KEY NORMAL, GIVES A FOREIGN-AREA-DIALING INDICATION TO MARKER. KEY OPERATED, GIVES A HOME AND FOREIGN-AREA-DIALING INDICATION TO MARKER.
3	17	TP/ PMM KEY	TIP PARTY/PARTY MISMATCH TP KEY OPERATED SIGNALS THE MARKER THAT A TIP PARTY CALL IS BEING HANDLED. PMM KEY OPERATED SIGNALS THE MARKER OF A PARTY MISMATCH.
3	17 ZWM	PS KEY	PERMANENT SIGNAL SIGNALS THE MARKER THAT IT IS HANDLING A PERMANENT SIGNAL CALL
3	17, ZWM	PD KEY	PARTIAL DIAL SIGNALS THE MARKER THAT IT IS HANDLING A PARTICAL DIAL CALL.
3	17	CNR KEY	COIN RETURN SIGNALS THE MARKER THAT THE COIN WAS RETURN BY THE OR. USED IN SETTING UP TRUNKS HAVING NO COIN RETURN FEATURES OF THEIR OWN.
3	17, K	SCN KEY	STUCK COIN SIGNAL THE MARKER THAT THERE IS A STUCK COIN.
2	9	GPA/ GPB KEY	ALLOTTER GROUP A AND B USED ON TESTS REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
2	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER.
2	8, 35	SGA/ SQB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
2	8, 83	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP
	84	OS SW (0-4)	
3	32	NGT KEY	NUMBER GROUP TEST ON MARKER TESTS FOR USE IN CONTROLLING SELECTION OF PARTICULAR NUMBER GROUPS BY THE PBX ALLOTTER.
3	32	NG (A-H) KEY	NUMBER GROUP MAKE BUSY ANY OF THE NG (A-H) KEYS PULLED OUT MAKES THE ASSOCIATED NUMBER GROUP APPEAR BUSY TO THE ALLOTTER ON A MARKER TEST CALL TO AN ALLOTTED NUMBER. CALLS CAN BE DIRECTED TO A PARTICULAR NUMBER GROUP BY PULLING OUT ALL KEYS BJT THE ONE ASSOCIATED WITH THE PARTICULAR NUMBER GROUP OR BY SETTING THE NGT SWITCH TO THE DESIRED NUMBER GROUP.
3	33	LP (0-11) KEY	PROGRESS AND IDENTIFICATION LAMP CONTROL LP(0-11) KEY OR LP SWITCH AND LPT KEY CONTROLS THE PROGRESS AND IDENTIFICATION LAMPS FOR MARKERS 0-11, RESPECTIVELY, WITH ALL KEYS IN, ALL MARKERS LIGHT PROGRESS AND IDENTIFICATION LAMPS. WITH ANY ONE KEY PULLED OUT. ONLY THE CORRESPONDING MARKER CAN LIGHT PROGRESS AND IDENTIFICATION LAMPS.
	143	LP SW (0-9)	
		LPT KEY	
3	11	SPL KEY	SPECIAL SIGNALS THE MARKER TO HANDLE A SPECIAL CALL.
3	13	NH/NT KEY	NO-HUNT/NO-TEST SIGNALS MARKER THAT IS HANDLING EITHER A "NO-HUNT" OR "NO-TEST"
3	PE, PF	NN KEY	NEITHER NO-TEST NOR NO-HUNT SIGNALS THE MARKER THAT IT IS HANDLING A "SPECIAL HUNT" CALL WHICH IS NEITHER "NO-TEST" NOR "NO-HUNT"
3	WU, WX, ZXE	PTL KEY	POTENTIAL TEST LINE WITH NT KEY OPERATED AND PTL NON OPERATED, AN OPERATE TEST IS MADE OF THE MARKER PT(0-9) TUBE, THE LF(0-9) RELAY AND THE ASSOCIATED M(0-4) RELAY CORRESPONDING TO THE OPERATED S(0-9) KEY OR SWITCH. WITH THE PTL KEY OPERATED AN OPERATE TEST OF THE PTL TUBE IS SUBSTITUTED FOR THE OPERATE TEST OF THE PT(0-9) TUBE.
3	16	EBH/ PBXH KEY	END OF BLOCK HUNT OPERATED TO EBH POSITION TO FORCE END OF BLOCK HUNTING ON PBX LINES PRIVATE BRANCH EXCHANGE HUNTING OPERATED TO CONTROL PBX HUNTING IN CONJUNCTION WITH S(0-9) KEY(S) OR SWITCH(ES) OR PBX HUNTING LINES.
3	16 KX	S (0-9) KEY	SLEEVE WITHIN TENS BLOCK WITH THE PBXH KEY OPERATED ON TEST TO PBX NUMBER, ALL NUMBERS WITHIN A TENS BLOCK ARE MADE TO LOOK BUSY TO THE MARKER EXCEPT THAT LINE CORRESPONDING TO S(0-9) KEY OR SWITCH OPERATED. WITH THE EBH KEY OPERATED, ALL NUMBERS WITHIN TENS BLOCK ARE MADE TO LOOK BUSY AND CAUSE MARKER TO BLOCK HUNT IF PBX GROUP INCLUDES MORE THAN ONE TENS BLOCK.
	16, JF	S SW (0-9)	
3	13	LR KEY	LINK RELEASE OPERATED TO SIMULATE A SIGNAL FROM AN INCOMING REGISTER THAT THE REGISTER LINK PREFERENCE AND CONTROL FAILED TO RELEASE.
3	13	DCK KEY	DOUBLE-CONNECTION CHECK OPERATED TO SIMULATE SIMULATE A SIGNAL FROM AN INCOMING REGISTER THAT THERE IS A DOUBLE-CONNECTION ON THE INCOMING REGISTER LINK.
3	13 VW, TL	RO KEY	REORDER OPERATED TO SIMULATE A REQUEST FOR REORDER BY INCOMING REGISTER.
3	12	OCN KEY	ODD CONNECTOR NORMAL SIGNALS THE MARKER THAT N EVEN INCOMING REGISTER CONNECTOR SEIZURE IS BEING SIMULATED. OPERATED SIGNALS THE MARKER THAT OFF INCOMING REGISTER CONNECTOR SEIZURE IS BEING SIMULATED.
3	15	PU KEY	PLUGGING UP OPERATED TO TEST PU RELAY AND RECYCLE MARKER TO TROUBLE INTERCEPT.
1, 2	4, KX	A-C(0-9) KEYS	CALLED DIGITS USED TO PRIME PRETRANSLATOR WITH FIRST THREE DIGITS OF CALLED NUMBER.
	ZVM, KZL, 4	A-C SW (0-9)	

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1, 2	NP	11 KEY	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME PRETRANSLATOR WITH NECESSARY ORIGINATING TRANSLATION FOR SELECTED ROUTE.
	NT, OW	LOC TRNSL (ALL KEYS NORMAL)	
	11, NQ	TRNA SW (LT/11)	
3	F	PTR KEY	PRETRANSLATOR TROUBLE RELEASE FORCES TROUBLE CONDITION WHICH CAUSES THE PRETRANSLATOR TO USE ITS TROUBLE RELEASE LEAD (PTR) AND SIMULATES AN OPEN PTR LEAD OR AN OPEN WINDING ON THE PTR RELAY OF AN ORIGINATING REGISTER.
3	F	PRL/OT KEY	PRETRANSLATOR RELEASE USED TO CHECK PRT RELEASE WHEN THE BRL LEAD IS OPEN. OPEN TRANSMITTING LEAD IS USED TO SIMULATE AN OPEN TRANSMITTING LEAD IN THE PRT.
3	F	RLK/LK KEY	RELEASE CHECK SIMULATES OPEN RLK PRETRANSLATOR LEAD. LOCK CHECK SIMULATES AN OPEN LOCKING CIRCUIT FOR PRT CLASS RELAYS OF AN ORIGINATING REGISTER.

ISSUE
5

MTC KEYS AND/OR SWITCHES
MARKER & PRETRANSLATOR CLASS OF TESTS

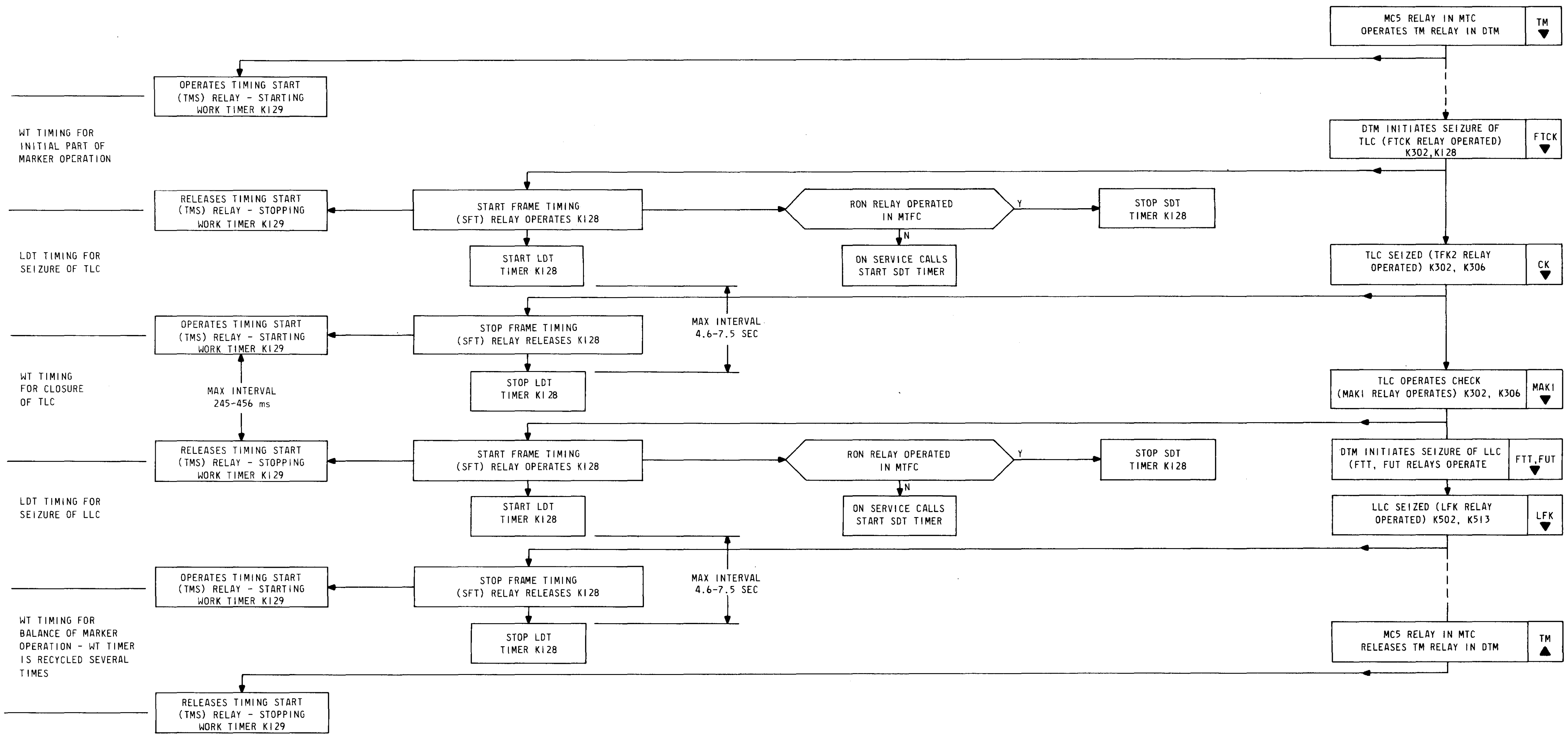
SFD-10-01-K003

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U. S. A.

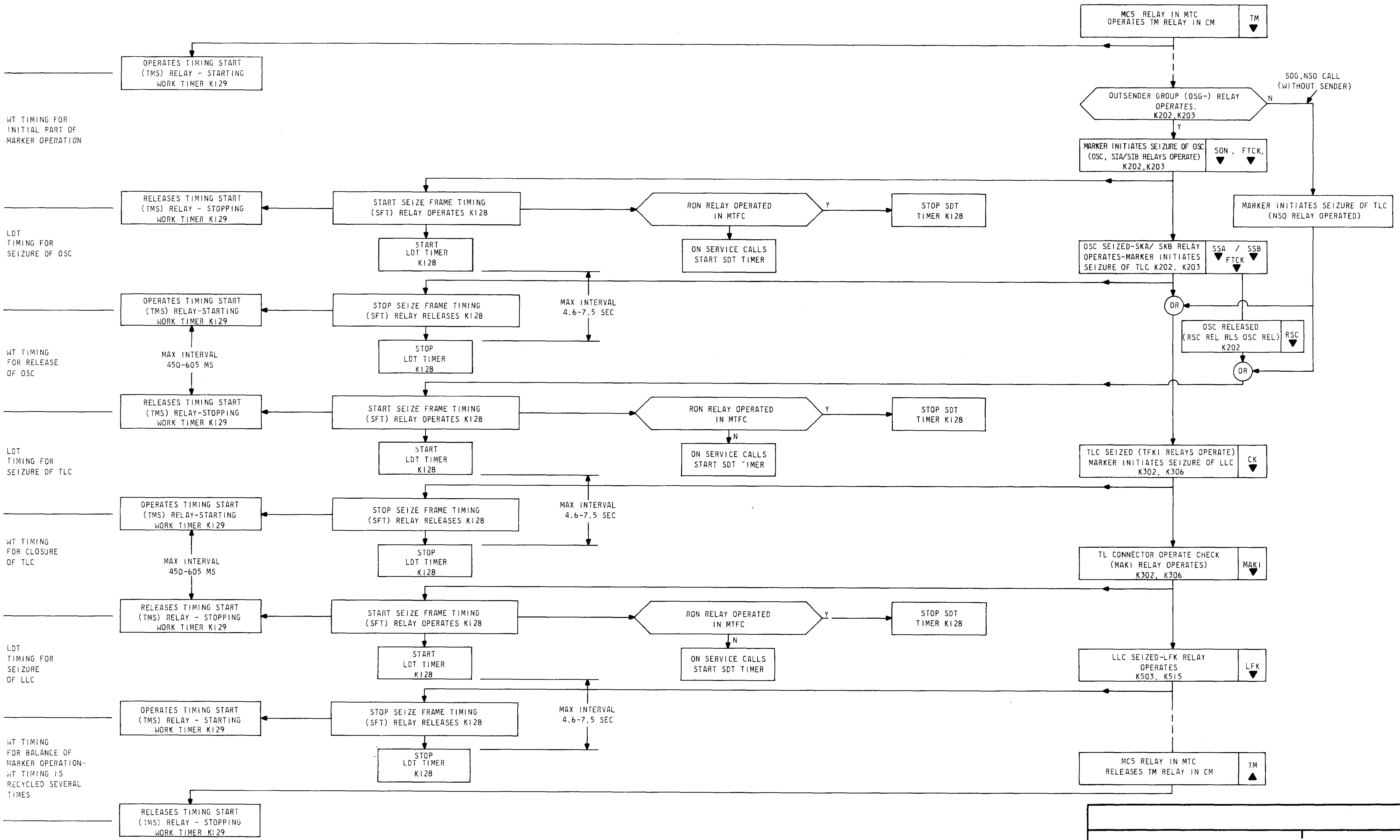
K&E 19 1153 10-75 41118•
E-7421 (10-71)


MC5 RELAY IN MTC OPERATES TM RELAY IN DTM
TM
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
WT TIMING FOR INITIAL PART OF MARKER OPERATION
DTM INITIATES SEIZURE OF TLC (FTCK RELAY OPERATED) K302,K128
FTCK
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
STOP SDT TIMER K128
N
LDT TIMING FOR SEIZURE OF TLC
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
TLC SEIZED (TFK2 RELAY OPERATED) K302, K306
CK
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
STOP FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
WT TIMING FOR CLOSURE OF TLC
MAX INTERVAL 245-456 ms
STOP LDT TIMER K128
TLC OPERATES CHECK (MAK1 RELAY OPERATES) K302, K306
MAK1
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
STOP SDT TIMER K128
DTM INITIATES SEIZURE OF LLC (FTT, FUT RELAYS OPERATE
FTT,FUT
N
LDT TIMING FOR SEIZURE OF LLC
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
LLC SEIZED (LFK RELAY OPERATED) K502, K513
LFK
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
STOP FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
WT TIMING FOR BALANCE OF MARKER OPERATION - WT TIMER IS RECYCLED SEVERAL TIMES
STOP LDT TIMER K128
MC5 RELAY IN MTC RELEASES TM RELAY IN DTM
TM
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129

FLOW CHART
MARKER TIMING
(DT CLASS)

ISSUE	DWG SIZE
5	6S

SFD-10-01- K004 BELL LABORATORIES


MC5 RELAY IN MTC OPERATES TM RELAY IN CM
TM
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
WT TIMING FOR INITIAL PART OF MARKER OPERATION
OUTSENDER GROUP (OSG-) RELAY OPERATES. K202,K203
N
Y
SOG,NSO CALL (WITHOUT SENDER)
MARKER INITIATES SEIZURE OF OSC (OSC, SIA/SIB RELAYS OPERATE) K202,K203
SON, FTCK,
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START SEIZE FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
STOP SDT TIMER K128
MARKER INITIATES SEIZURE OF TLC (NSO RELAY OPERATED)
LDT TIMING FOR SEIZURE OF OSC
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
OSC SEIZED-SKA/ SKB RELAY OPERATES-MARKER INITIATES SEIZURE OF TLC K202, K203
SSA / SSB
FTCK
OPERATES TIMING START (TMS) RELAY-STARTING WORK TIMER K129
STOP SEIZE FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
OR
OSC RELEASED (RSC REL RLS OSC REL) K202
RSC
WT TIMING FOR RELEASE OF OSC
MAX INTERVAL 450-605 MS
STOP LDT TIMER K128
OR
RELEASES TIMING START (TMS) RELAY-STOPPING WORK TIMER K129
START SEIZE FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
STOP SDT TIMER K128
N
LDT TIMING FOR SEIZURE OF TLC
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
TLC SEIZED (TFK1 RELAYS OPERATE) MARKER INITIATES SEIZURE OF LLC K302, K306
CK
OPERATES TIMING START (TMS) RELAY-STARTING WORK TIMER K129
STOP SEIZE FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
WT TIMING FOR CLOSURE OF TLC
MAX INTERVAL 450-605 MS
STOP LDT TIMER K128
TL CONNECTOR OPERATE CHECK (MAK1 RELAY OPERATES) K302, K306
MAK1
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START SEIZE FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
STOP SDT TIMER K128
N
LDT TIMING FOR SEIZURE OF LLC
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
LLC SEIZED-LFK RELAY OPERATES K503, K515
LFK
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
STOP SEIZE FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
WT TIMING FOR BALANCE OF MARKER OPERATION-WT TIMING IS RECYCLED SEVERAL TIMES
STOP LDT TIMER K128
MC5 RELAY IN MTC RELEASES TM RELAY IN CM
TM
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129

FLOW CHART
MARKER TIMING
(ORIG CLASS)

DWG SIZE 6S

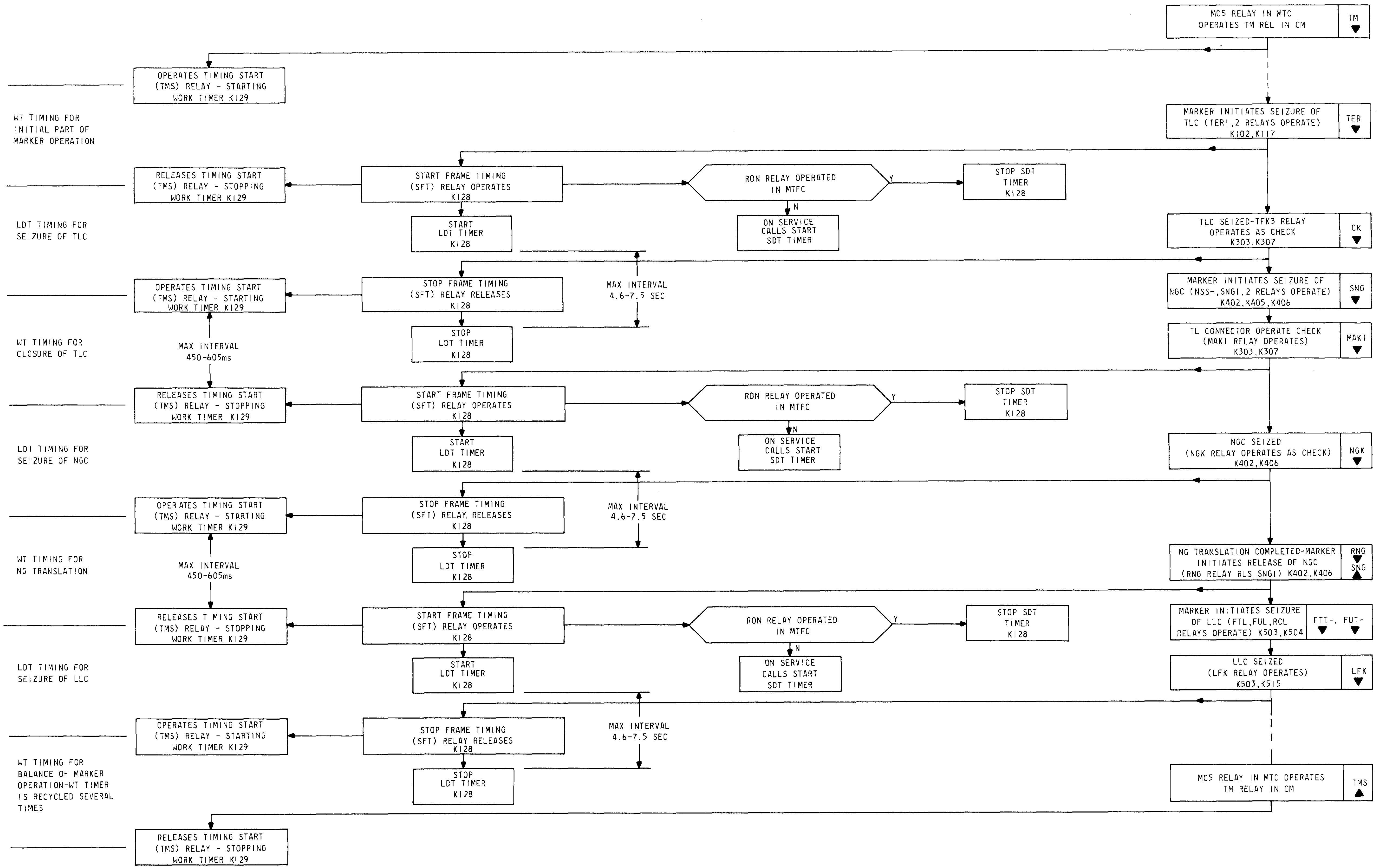
ISSUE 5

BELL LABORATORIES

SFD-10-01-

K005

SFD-10-01-K005


MC5 RELAY IN MTC OPERATES TM REL IN CM
TM
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
WT TIMING FOR INITIAL PART OF MARKER OPERATION
MARKER INITIATES SEIZURE OF TLC (TER1,2 RELAYS OPERATE) K102,K117
TER
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
N
STOP SDT TIMER K128
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
LDT TIMING FOR SEIZURE OF TLC
TLC SEIZED-TFK3 RELAY OPERATES AS CHECK K303,K307
CK
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
STOP FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
MARKER INITIATES SEIZURE OF NGC (NSS-,SNG1,2 RELAYS OPERATE) K402,K405,K406
SNG
STOP LDT TIMER K128
WT TIMING FOR CLOSURE OF TLC
MAX INTERVAL 450-605ms
TL CONNECTOR OPERATE CHECK (MAK1 RELAY OPERATES) K303,K307
MAK1
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
N
STOP SDT TIMER K128
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
LDT TIMING FOR SEIZURE OF NGC
NGC SEIZED (NGK RELAY OPERATES AS CHECK) K402,K406
NGK
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
STOP FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
STOP LDT TIMER K128
WT TIMING FOR NG TRANSLATION
MAX INTERVAL 450-605ms
NG TRANSLATION COMPLETED-MARKER INITIATES RELEASE OF NGC (RNG RELAY RLS SNG1) K402,K406
RNG
SNG
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129
START FRAME TIMING (SFT) RELAY OPERATES K128
RON RELAY OPERATED IN MTFC
Y
N
STOP SDT TIMER K128
MARKER INITIATES SEIZURE OF LLC (FTL,FUL,RCL RELAYS OPERATE) K503,K504
FTT-, FUT-
START LDT TIMER K128
ON SERVICE CALLS START SDT TIMER
LDT TIMING FOR SEIZURE OF LLC
LLC SEIZED (LFK RELAY OPERATES) K503,K515
LFK
OPERATES TIMING START (TMS) RELAY - STARTING WORK TIMER K129
STOP FRAME TIMING (SFT) RELAY RELEASES K128
MAX INTERVAL 4.6-7.5 SEC
STOP LDT TIMER K128
WT TIMING FOR BALANCE OF MARKER OPERATION-WT TIMER IS RECYCLED SEVERAL TIMES
MC5 RELAY IN MTC OPERATES TM RELAY IN CM
TMS
RELEASES TIMING START (TMS) RELAY - STOPPING WORK TIMER K129

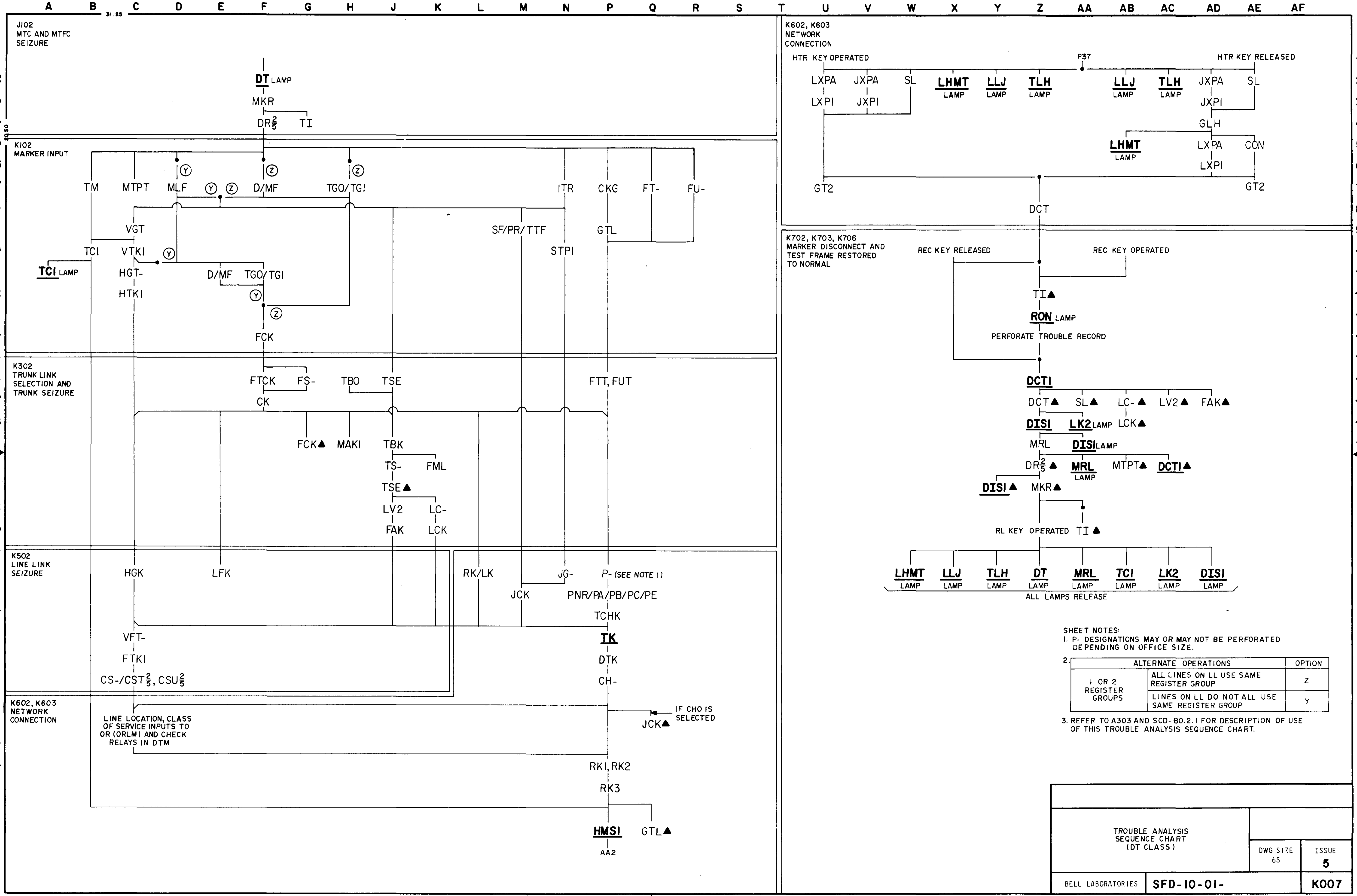
FLOW CHART
MARKER TIMING
(INC CLASS)

ISSUE 5
DWG SIZE 6S

SFD-10-01- K006 BELL LABORATORIES

E-7481 (6-79)
PRINTED IN U.S.A.

SFD-10-01-K006



SHEET NOTES:
1. P- DESIGNATIONS MAY OR MAY NOT BE PERFORATED DEPENDING ON OFFICE SIZE.
2.

ALTERNATE OPERATIONS		OPTION
1 OR 2 REGISTER GROUPS	ALL LINES ON LL USE SAME REGISTER GROUP	Z
	LINES ON LL DO NOT ALL USE SAME REGISTER GROUP	Y

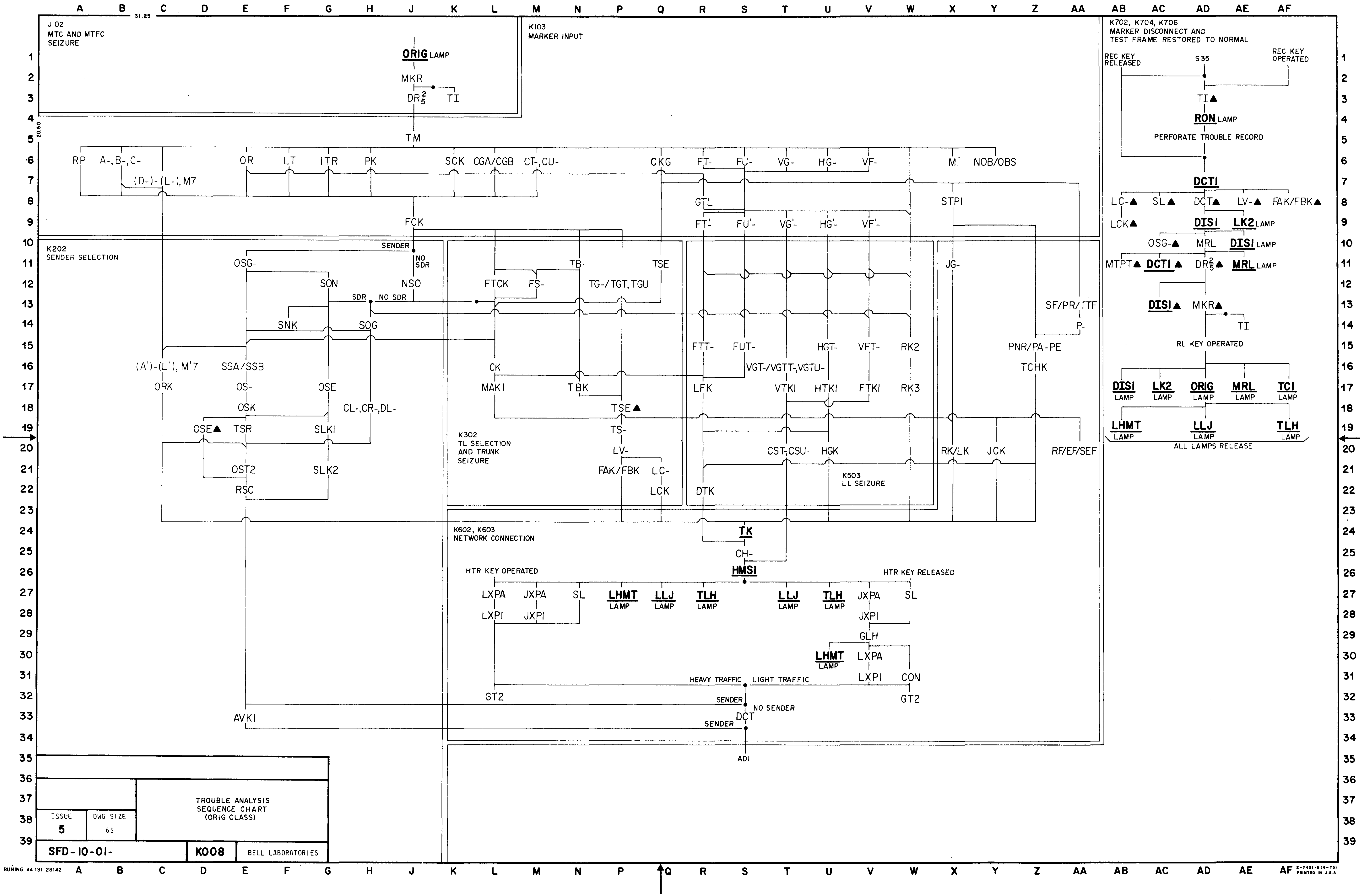
3. REFER TO A303 AND SCD-80.2.1 FOR DESCRIPTION OF USE OF THIS TROUBLE ANALYSIS SEQUENCE CHART.

TROUBLE ANALYSIS
SEQUENCE CHART
(DT CLASS)

DWG SIZE 6S
ISSUE 5
BELL LABORATORIES SFD-10-01- K007

SFD-10-01-K007

BRUNING 44-131 28142
E-7421-B (6-73) PRINTED IN U.S.A.



TROUBLE ANALYSIS
SEQUENCE CHART
(ORIG CLASS)

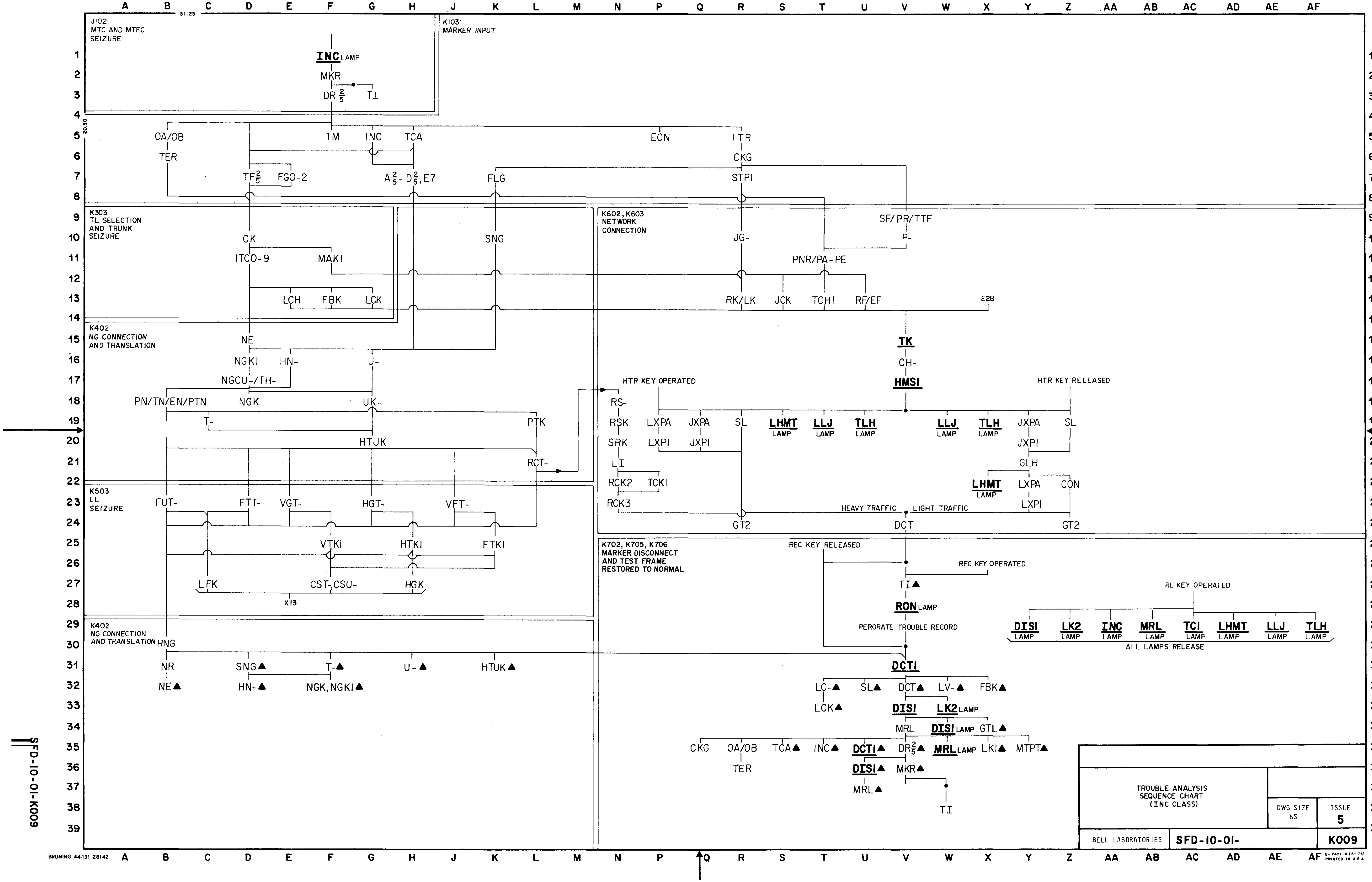
ISSUE	DWG SIZE
5	6S

SFD-10-01- K008 BELL LABORATORIES

RUNING 44-131 28142

E-7421-8 (6-75) PRINTED IN U.S.A.

SFD-10-01-K008



TROUBLE ANALYSIS
SEQUENCE CHART
(INC CLASS)

DWG SIZE 6S

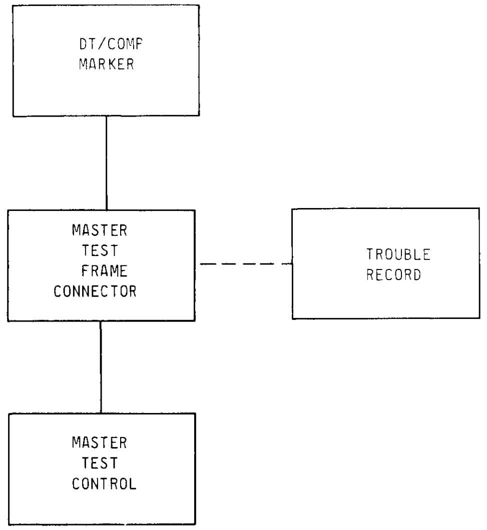
ISSUE 5

BELL LABORATORIES SFD-10-01- K009

SFD-10-01-K009

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



INDEX

PAGE NO.	TITLE
K101	PART K1 - MARKER INPUT
K102	SEQUENCE CHART - MARKER INPUT DT CLASS OF TEST
K103	SEQUENCE CHART - MARKER INPUT ORIG/INC CLASS OF TEST
K104	MASTER TEST CONTROL CHECK
K105	MASTER TEST CONTROL CHECK
K106	SEIZURE OF DIAL TONE MARKER AND INITIAL INPUT TO MARKER
K107	MISC INPUTS TO MARKER AND TROUBLE RELEASE CONTROLS
K108	LINE LINK FRAME INPUTS TO DIAL TONE MARKER
K109	LINE LINK FRAME INPUT TO COMPLETING MARKER
K110	VERTICAL GROUP INPUT TO DIAL TONE MARKER
K111	VERTICAL GROUP INPUT TO COMPLETING MARKER
K112	HORIZONTAL GROUP INPUT TO DIAL TONE MARKER
K113	HORIZONTAL GROUP AND VERTICAL FILE INPUT TO COMPLETING MARKER
K114	RESERVED
K115	MAKE BUSY AND INDICATING LEADS
K116	REGISTRATION OF TRUNK CLASS INFORMATION IN COMPLETING MARKER
K117	MISC INPUTS TO COMPLETING MARKER
K118	MISC INPUTS TO COMPLETING MARKER
K119	MISC INPUTS TO COMPLETING MARKER
K120	CALLED NUMBER INPUT TO COMPLETING MARKER A- AND B- DIGITS
K121	CALLED NUMBER INPUT TO COMPLETING MARKER C- AND D- DIGITS
K122	CALLED NUMBER INPUT TO COMPLETING MARKER E- THROUGH G- DIGITS
K123	CALLED NUMBER INPUT TO COMPLETING MARKER H- THROUGH L- DIGITS
K124	COIN, PERMANENT SIGNAL AND PARTIAL DIAL INPUTS TO COMPLETING MARKER
K125	CLASS OF SERVICE INPUTS TO COMPLETING MARKER
K126	RESERVED
K127	TRUNK LINK FRAME INPUT TO COMPLETING MARKER
K128	MARKER TIMING
K129	MARKER TIMING

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART K1
MARKER INPUT

SFD-10-01-K101

BELL TELEPHONE LABORATORIES
INCORPORATED

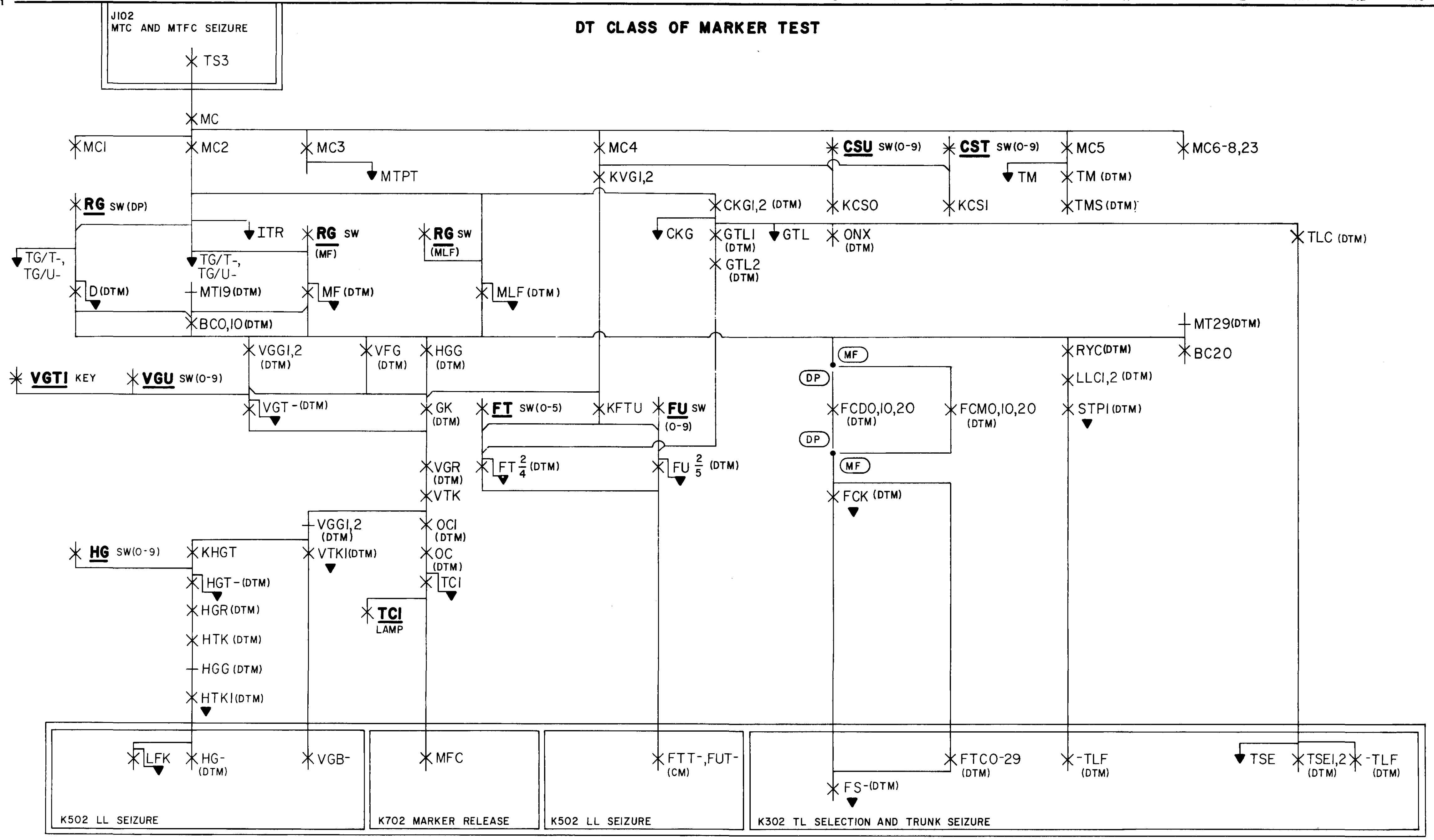
DWG SIZE
6S

PRINTED IN U.S.A.

E-7421 (10-71)

SFD-10-01-K101
2 SHEETS, SHEET 1

DT CLASS OF MARKER TEST



ISSUE
5

SFD-10-01-K102

SEQUENCE CHART
MARKER INPUT
DT CLASS OF TEST

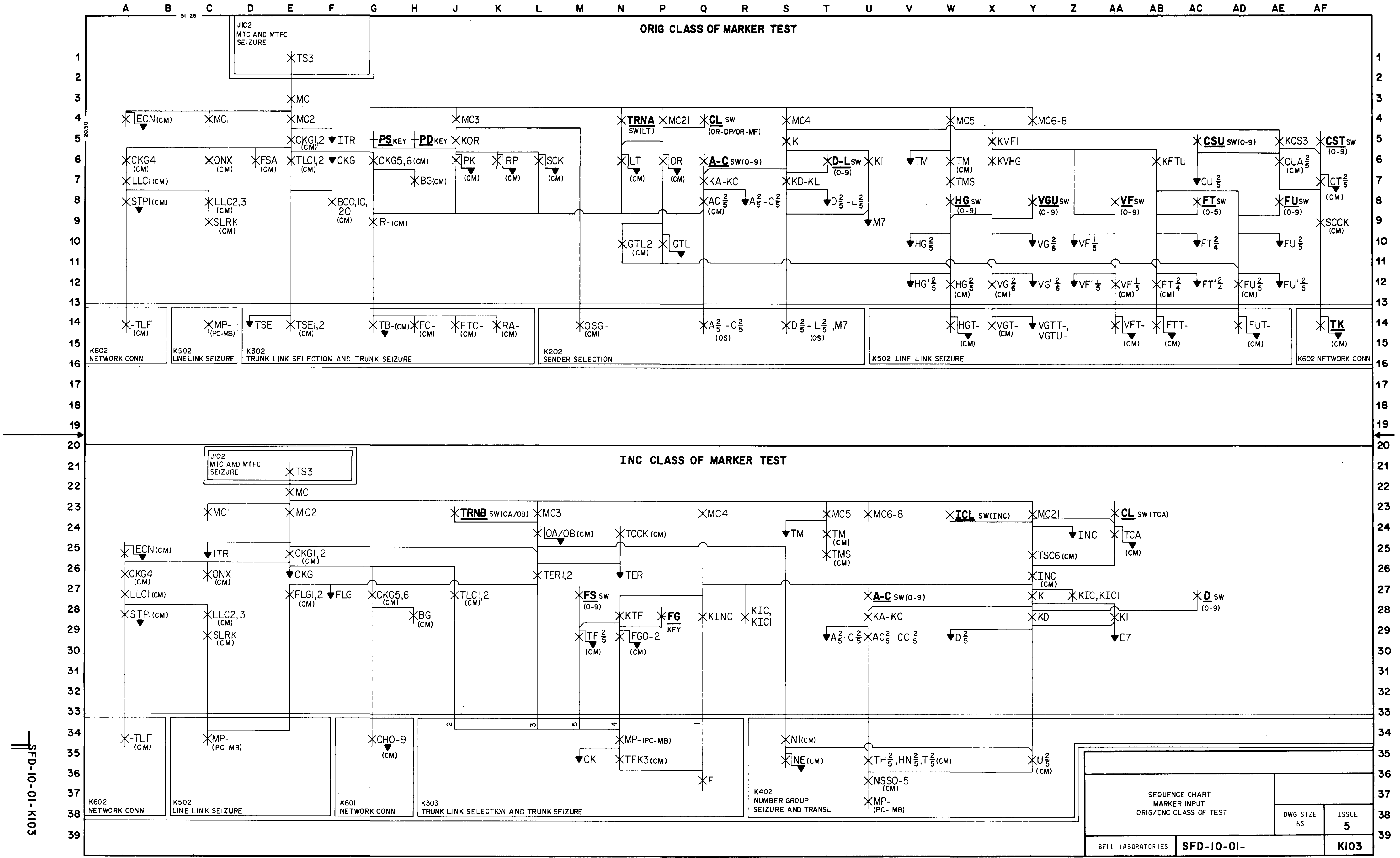
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-73)

SFD-10-01-K102



SEQUENCE CHART
MARKER INPUT
ORIG/INC CLASS OF TEST

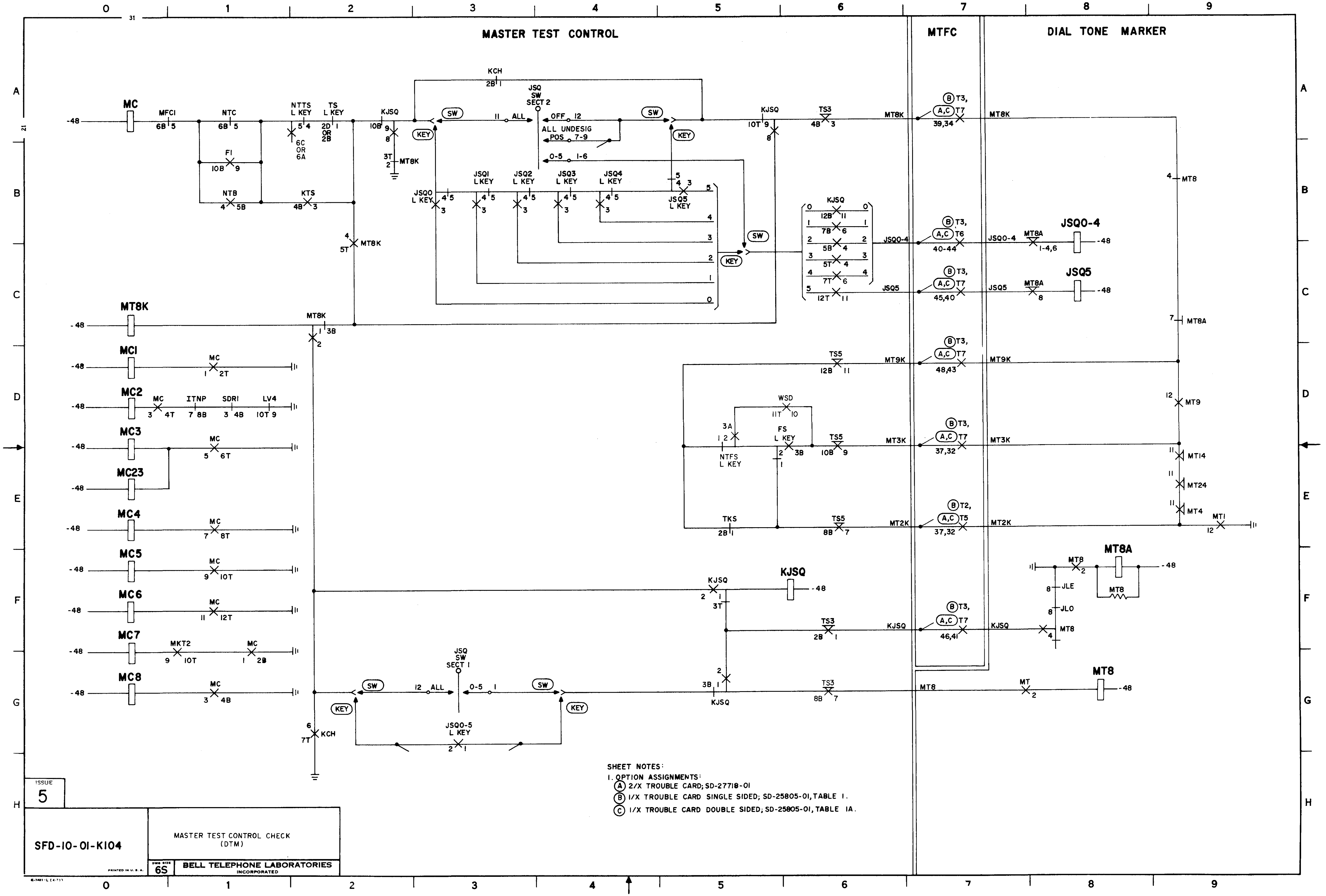
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K103

SFD-10-01-K103

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



SHEET NOTES:

1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K104

MASTER TEST CONTROL CHECK
(DTM)

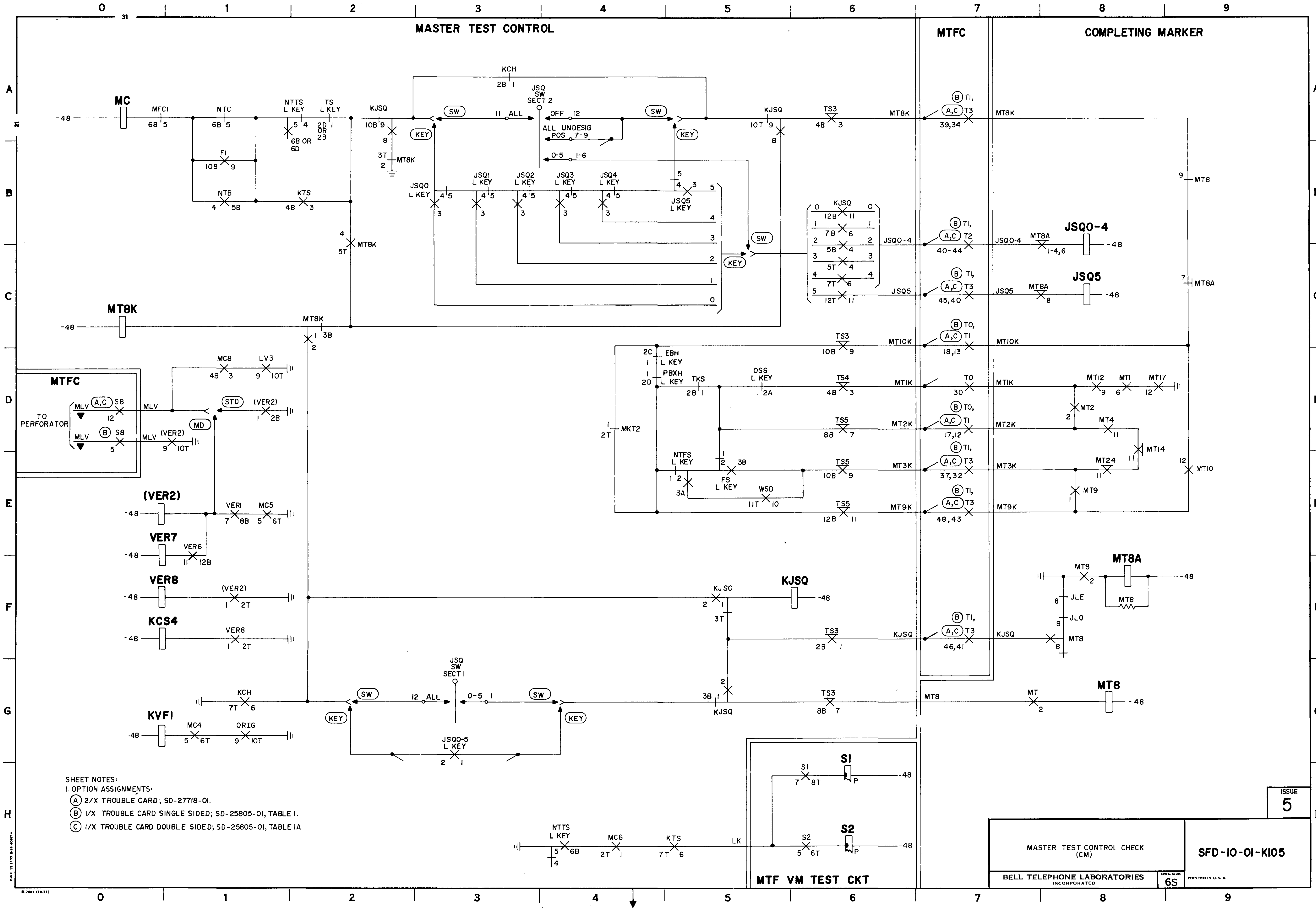
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-71)

SFD-10-01-K104



SHEET NOTES:
1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

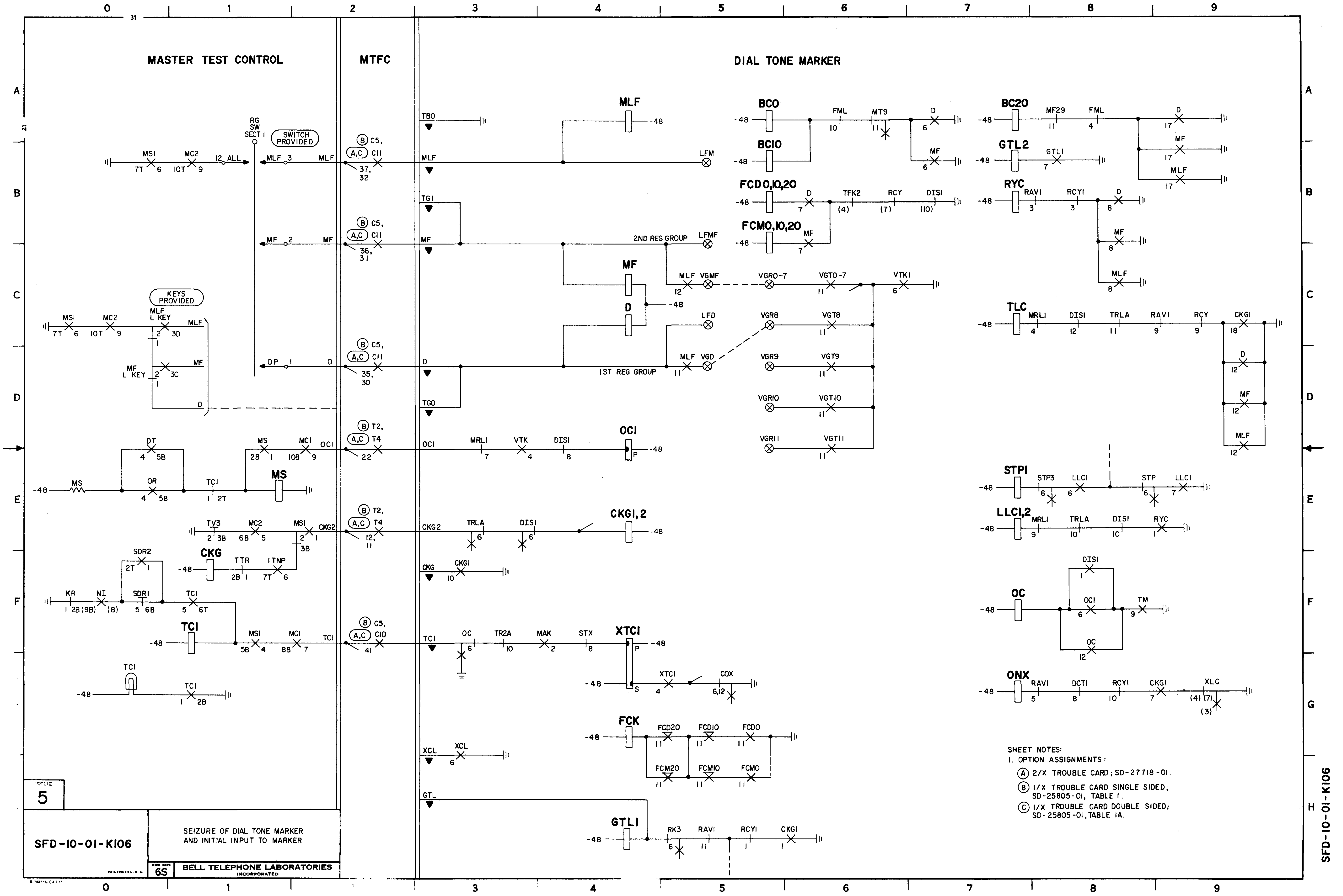
MASTER TEST CONTROL CHECK
(CM)

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-K105



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K106

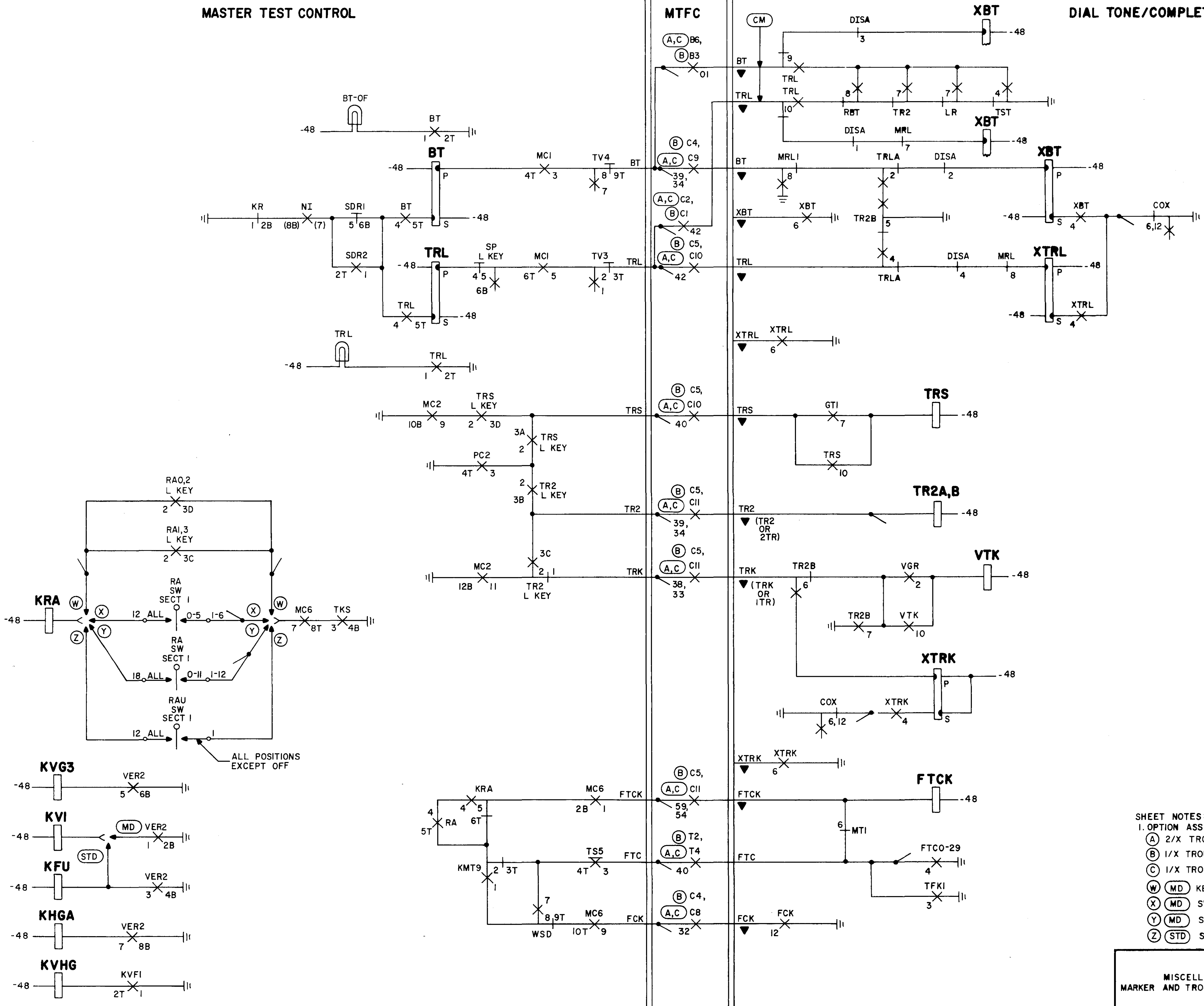
SEIZURE OF DIAL TONE MARKER
AND INITIAL INPUT TO MARKER

6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-K106



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
Ⓦ (MD) KEY CONTROL
Ⓧ (MD) SWITCH CONTROL
Ⓨ (MD) SWITCH CONTROL
Ⓩ (STD) SWITCH CONTROL

ISSUE 5

MISCELLANEOUS INPUTS TO
MARKER AND TROUBLE RELEASE CONTROLS

SFD-10-01-K107

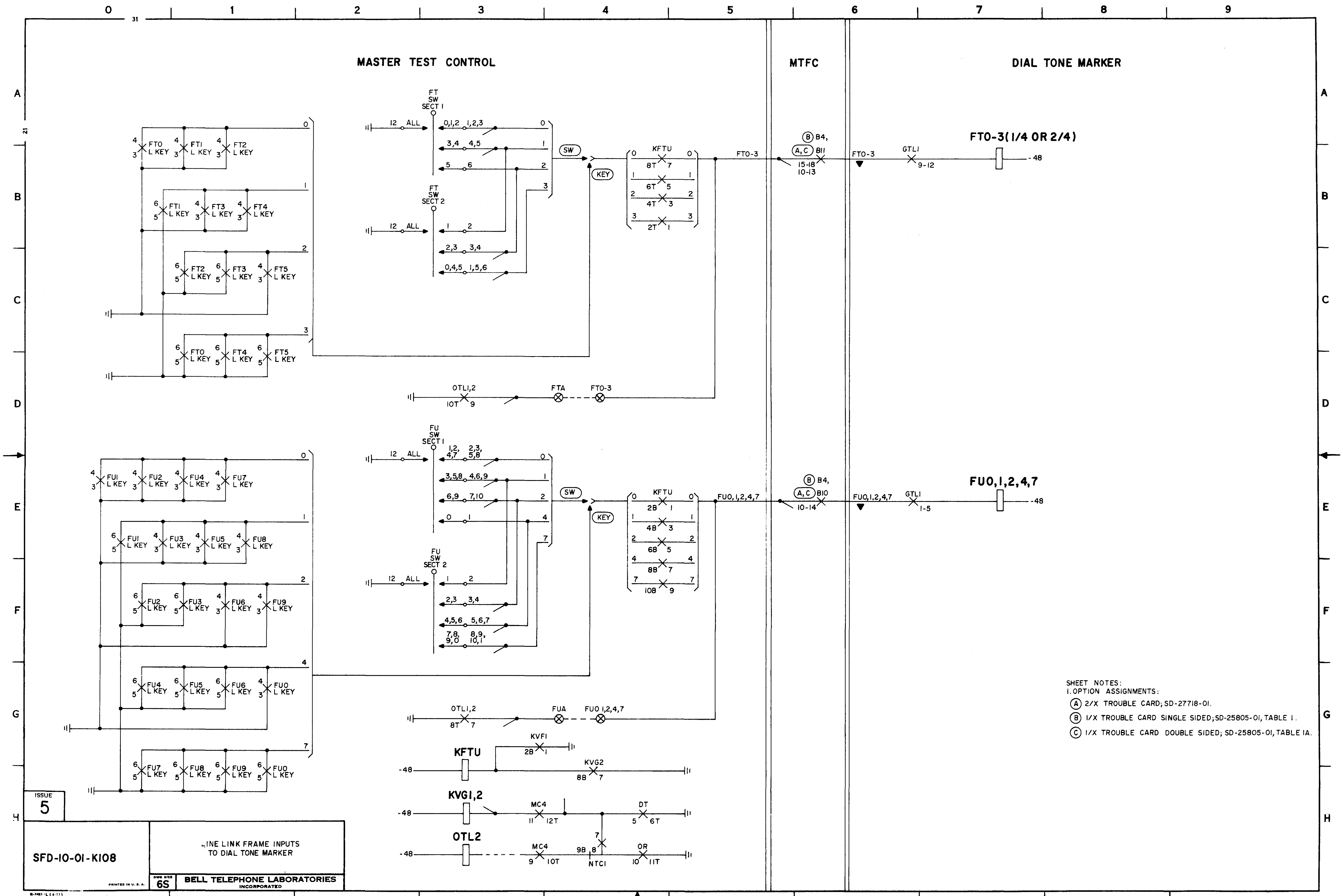
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-K107

E-7421 (10-71)



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K108

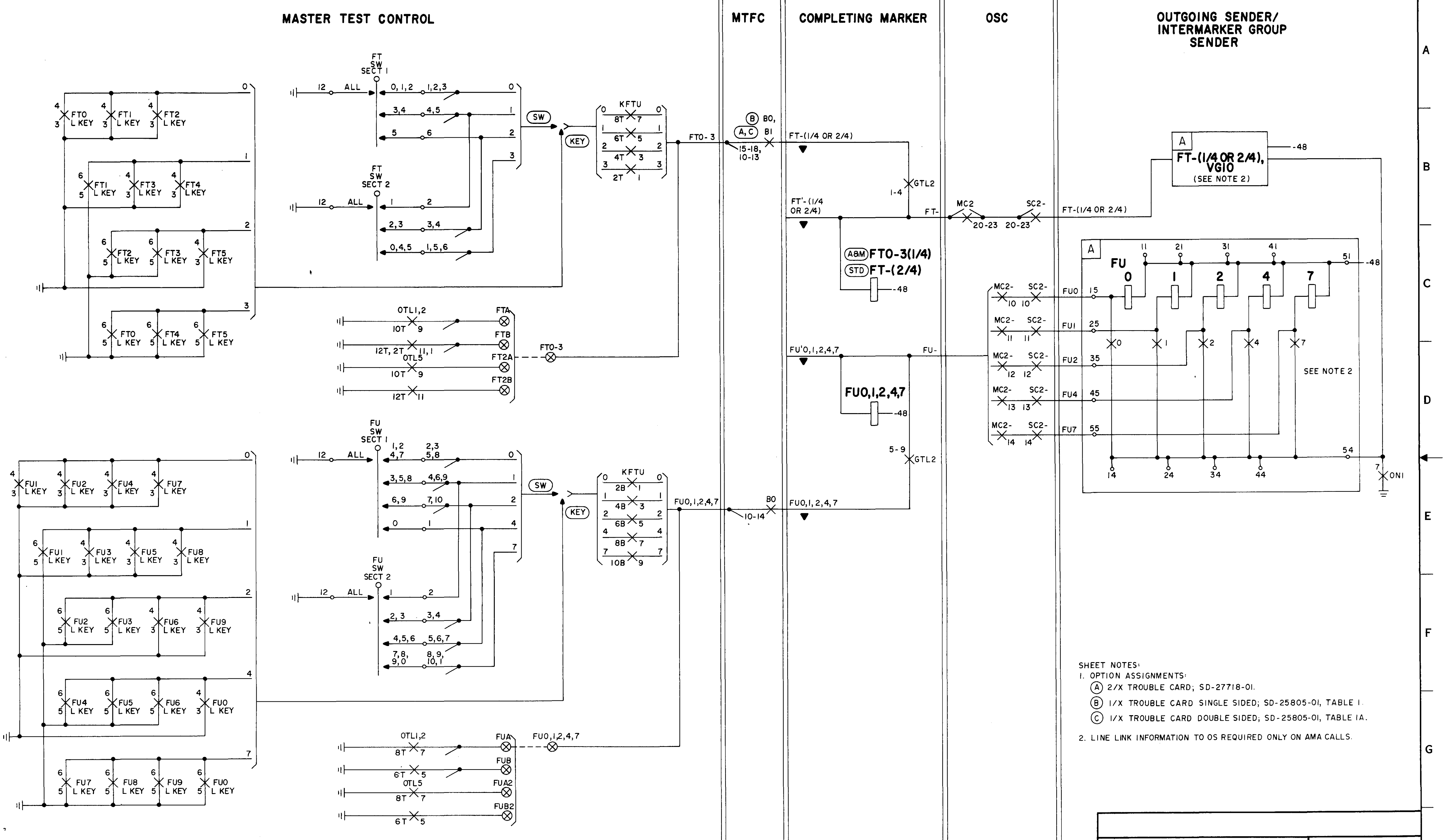
LINE LINK FRAME INPUTS
TO DIAL TONE MARKER

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-K108



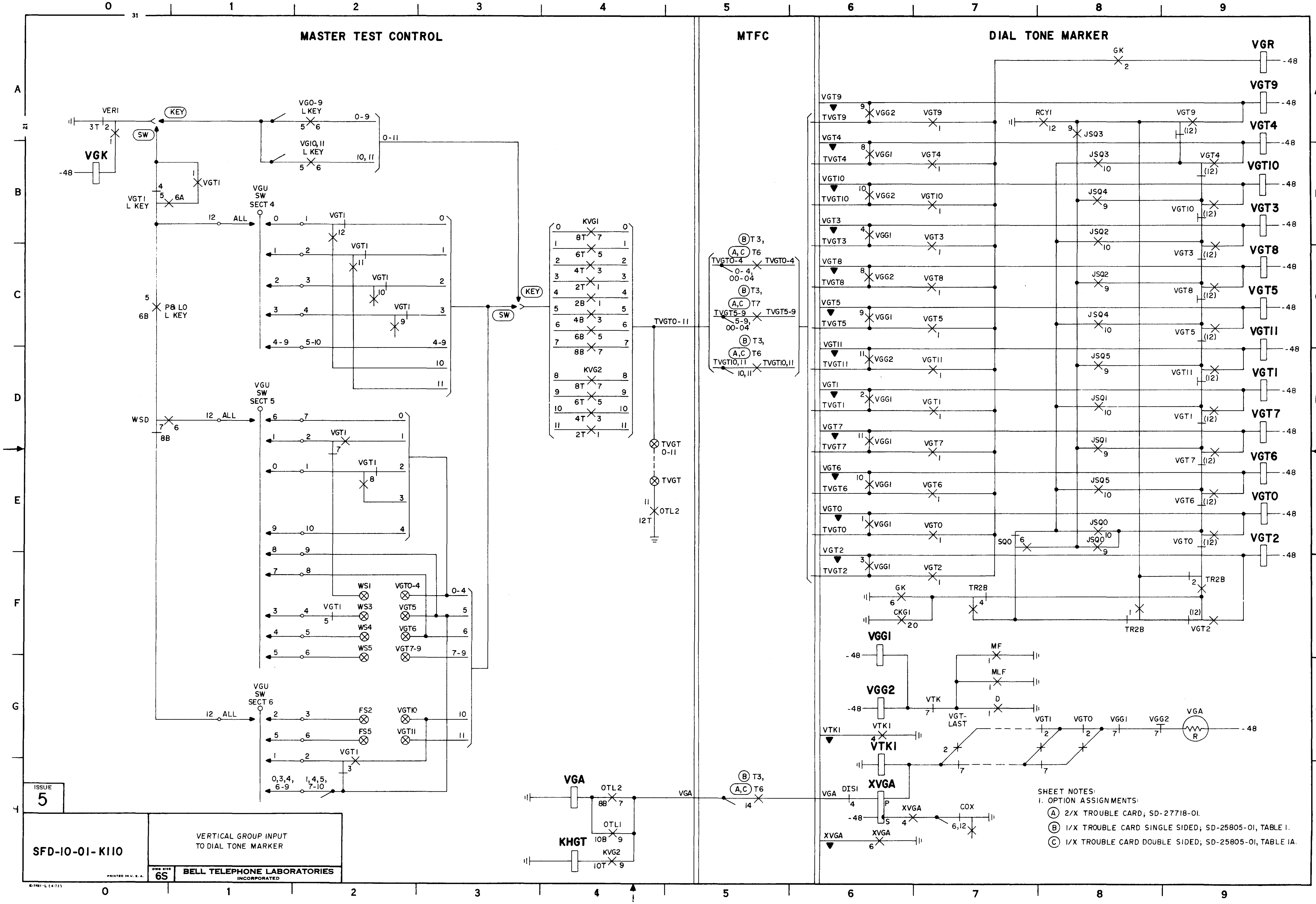
SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
2. LINE LINK INFORMATION TO OS REQUIRED ONLY ON AMA CALLS.

LINE LINK FRAME INPUT TO COMPLETING MARKER (ORIG CLASS)	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	K109

SFD-10-01-K109

E-7431 (6-73)
PRINTED IN U.S.A.



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K110

VERTICAL GROUP INPUT
TO DIAL TONE MARKER

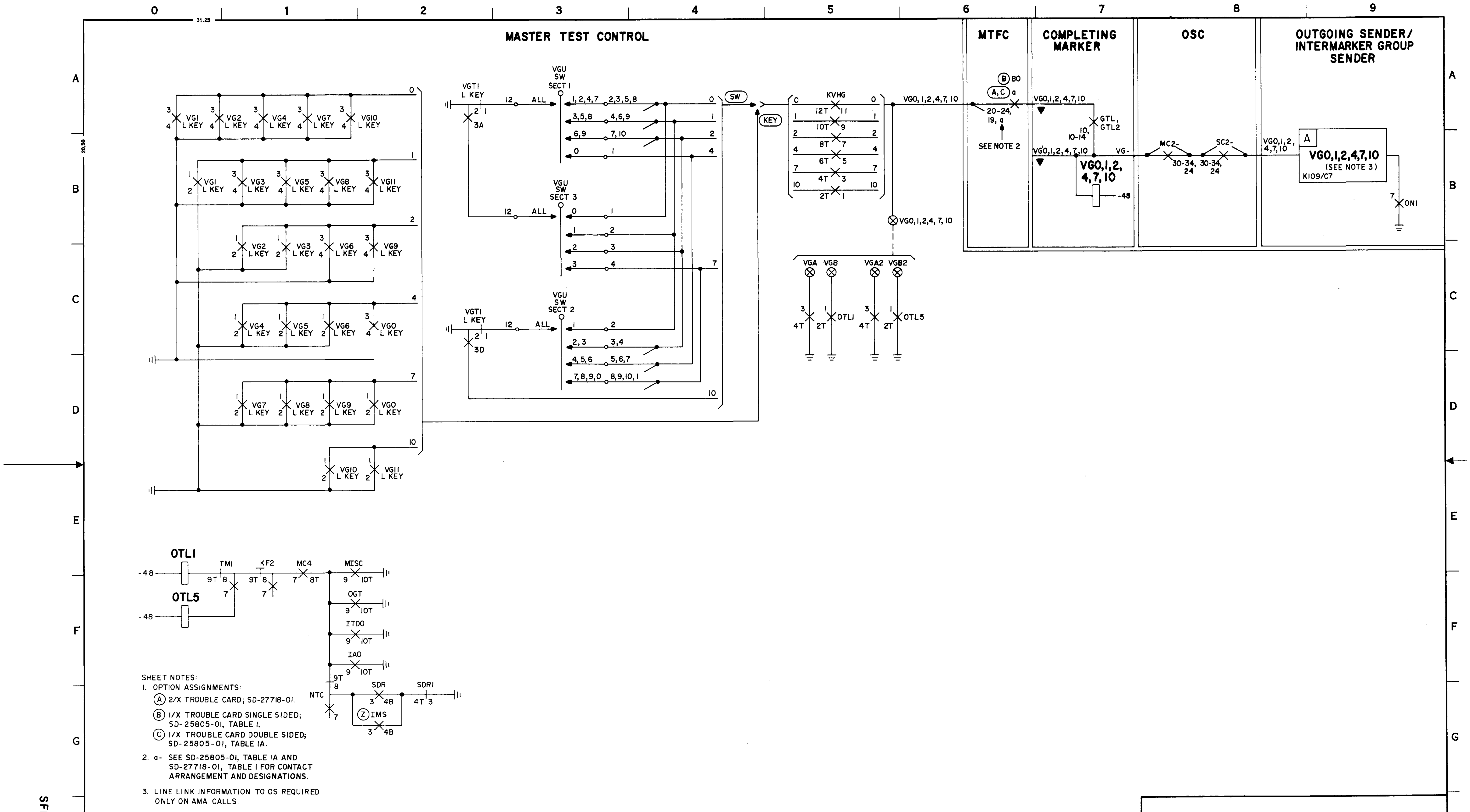
PRINTED IN U.S.A.

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-K110



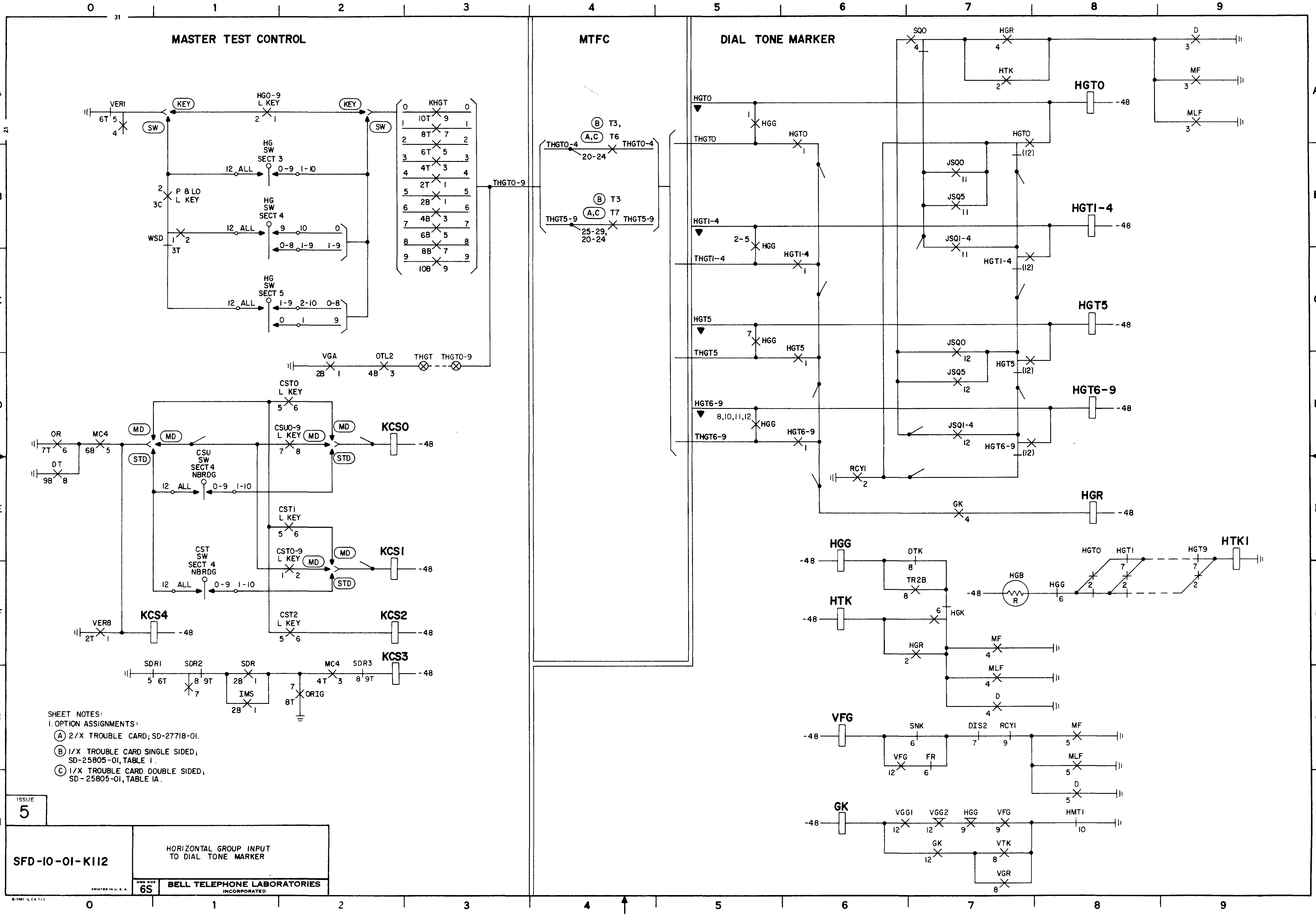
SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
2. a- SEE SD-25805-01, TABLE IA AND SD-27718-01, TABLE I FOR CONTACT ARRANGEMENT AND DESIGNATIONS.
3. LINE LINK INFORMATION TO OS REQUIRED ONLY ON AMA CALLS.

VERTICAL GROUP INPUT TO
COMPLETING MARKER
(ORIG CLASS)

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K111



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE 5

SFD-10-01-K112

HORIZONTAL GROUP INPUT
TO DIAL TONE MARKER

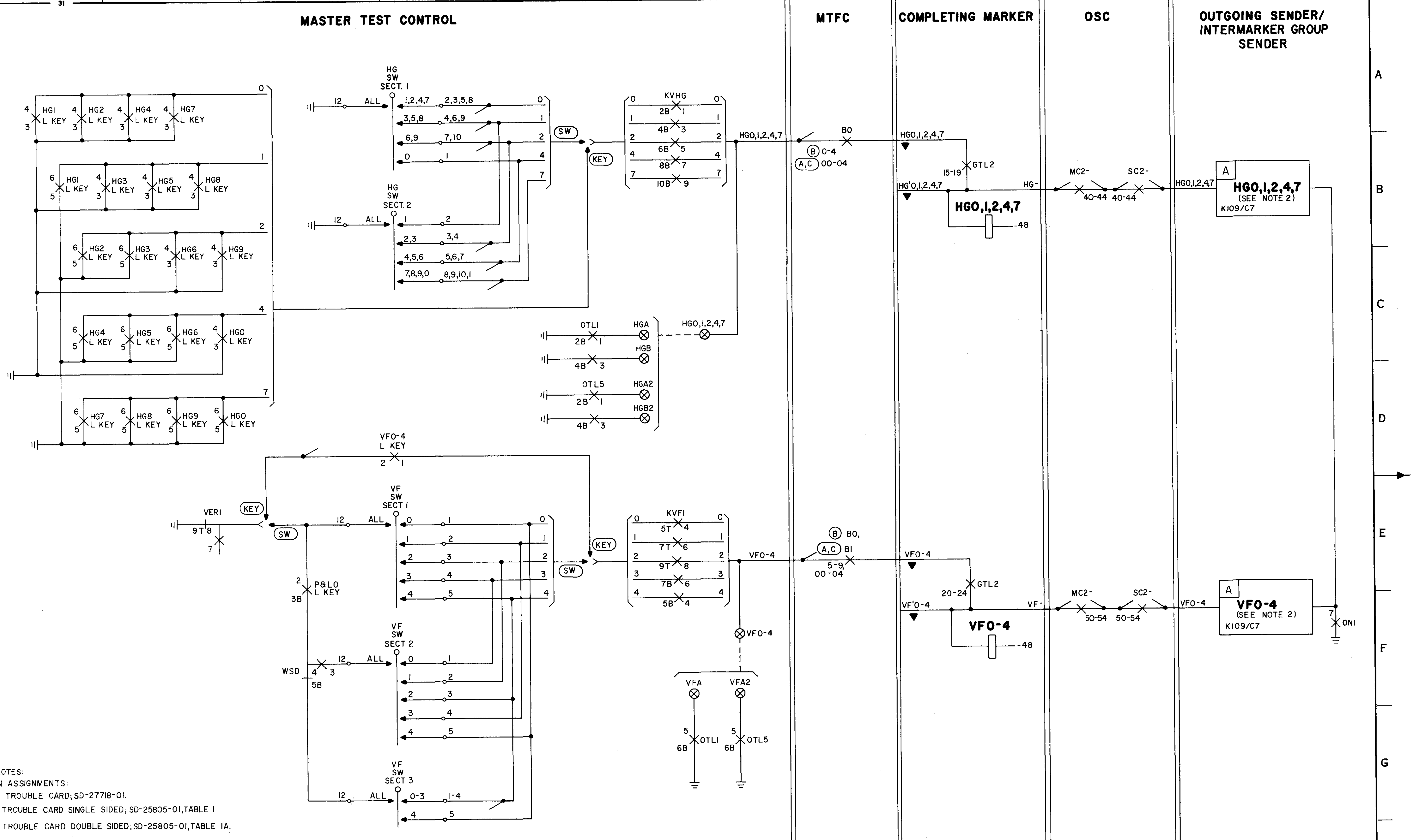
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-71)

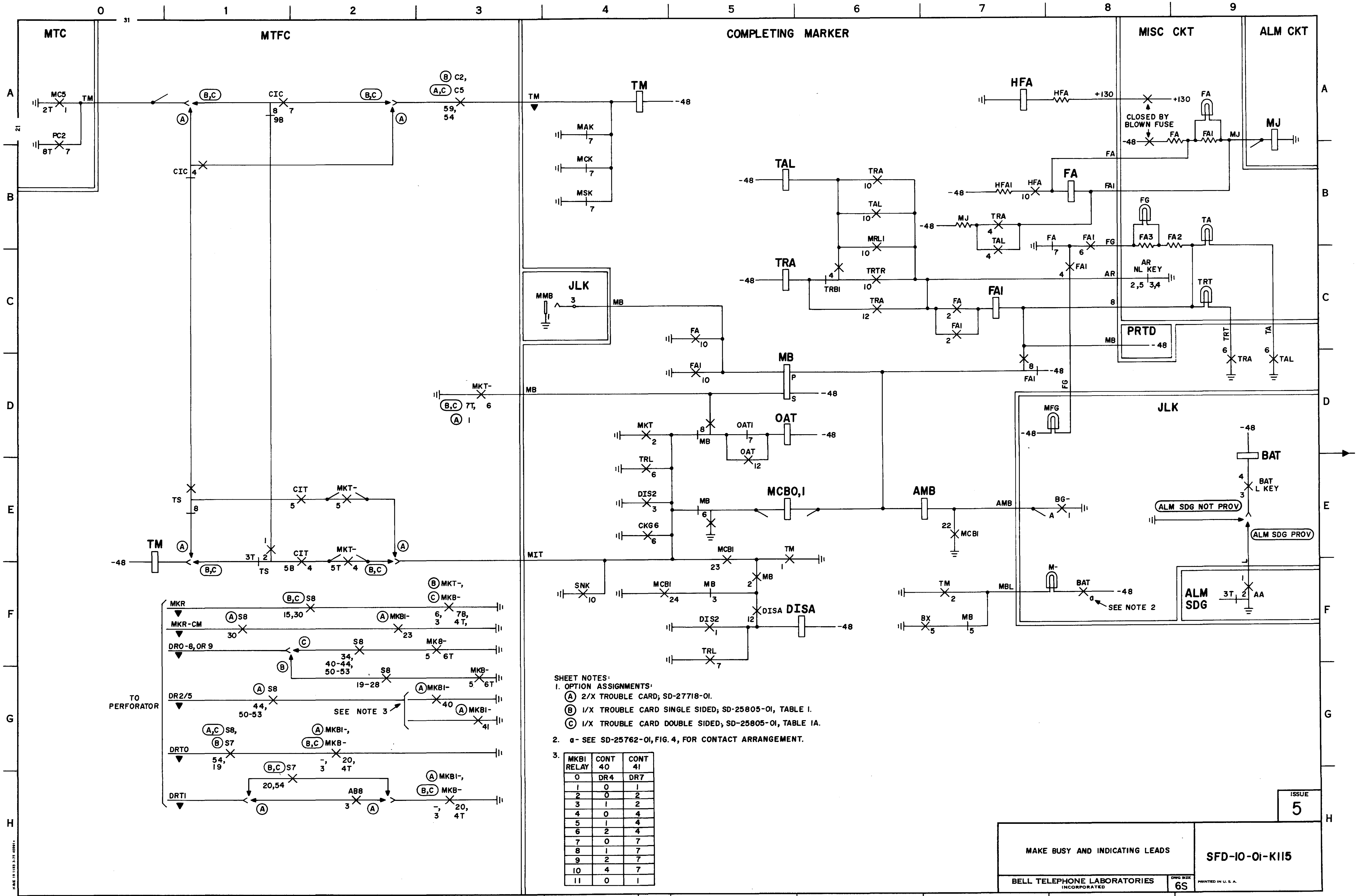
SFD-10-01-K112



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
2. LINE LINK INFORMATION TO OS REQUIRED ONLY ON AMA CALLS.

	ISSUE 5
HORIZONTAL GROUP AND VERTICAL FILE INPUT TO COMPLETING MARKER (ORIG CLASS)	SFD-10-01-K113
BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S	PRINTED IN U.S.A.



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
2. a- SEE SD-25762-01, FIG. 4, FOR CONTACT ARRANGEMENT.
3.

MKBI RELAY	CONT 40	CONT 41
0	DR4	DR7
1	0	1
2	0	2
3	1	2
4	0	4
5	1	4
6	2	4
7	0	7
8	1	7
9	2	7
10	4	7
11	0	1

ISSUE 5

MAKE BUSY AND INDICATING LEADS

SFD-10-01-K115

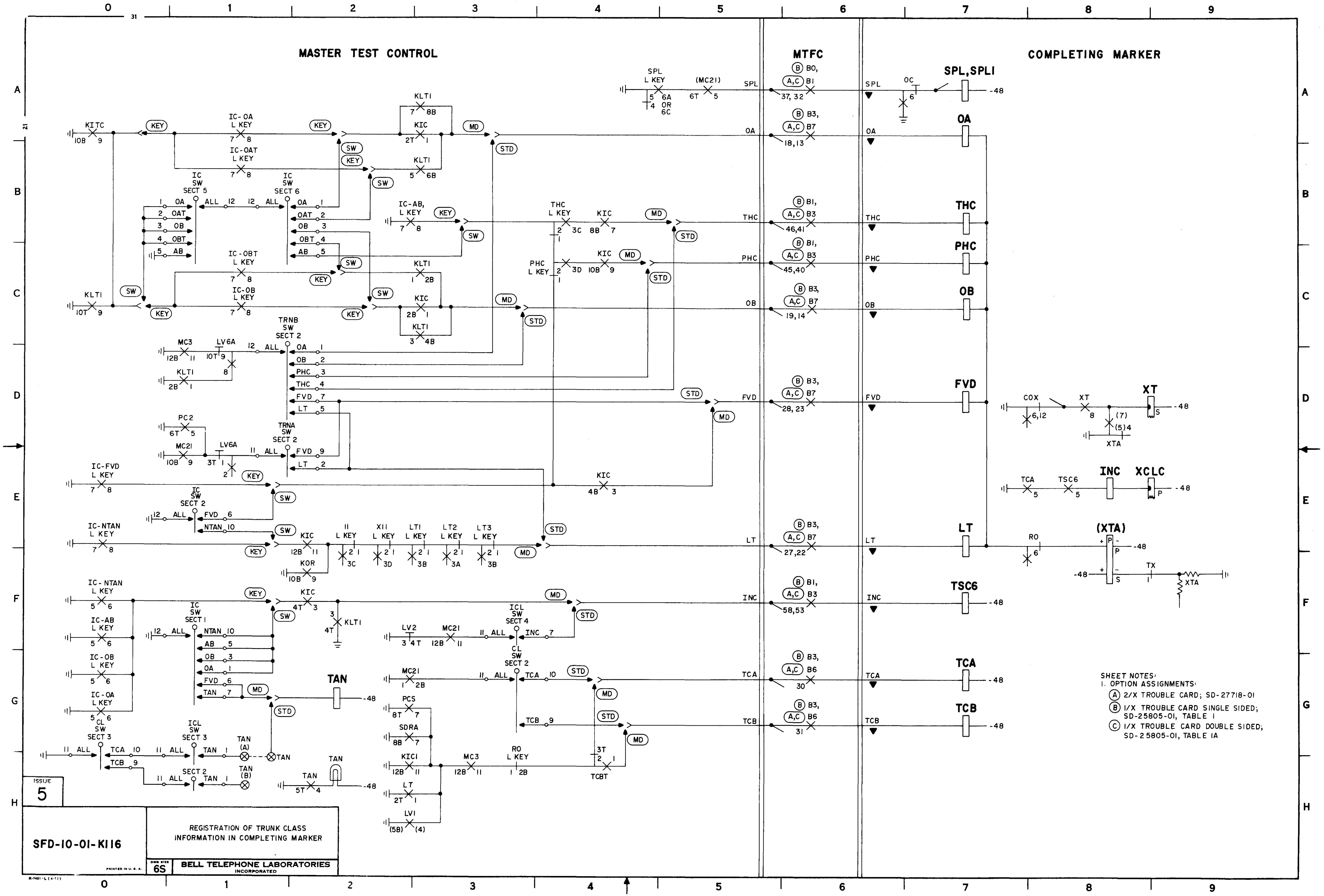
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-K115

E-7421 (10-71)



SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-K116

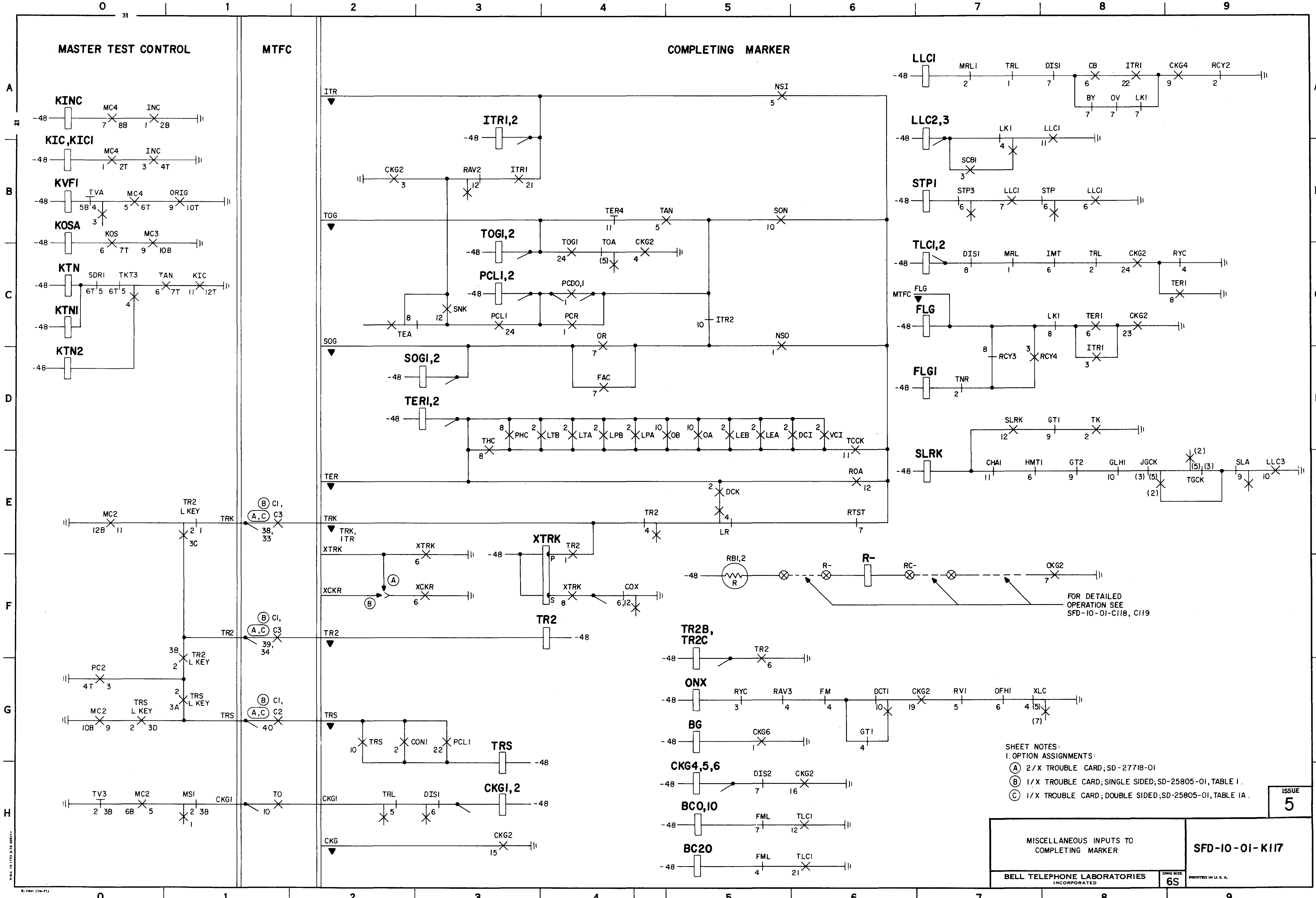
REGISTRATION OF TRUNK CLASS
INFORMATION IN COMPLETING MARKER

PRINTED IN U.S.A.

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-K116



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD; SINGLE SIDED; SD-25805-01, TABLE I.
Ⓒ 1/X TROUBLE CARD; DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE
5

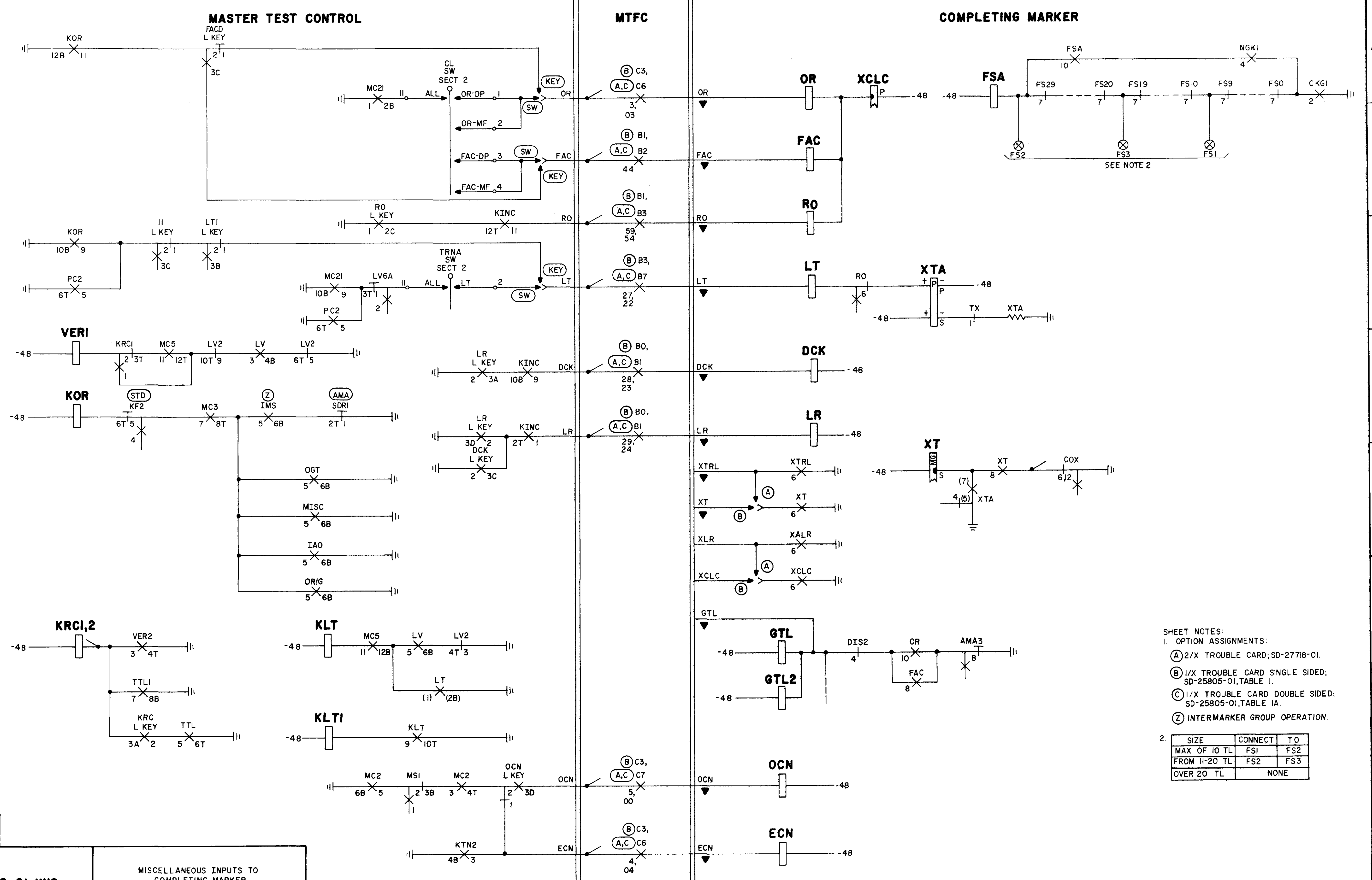
MISCELLANEOUS INPUTS TO
COMPLETING MARKER

SFD-10-01-K117

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.



SHEET NOTES:
1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

Ⓩ INTERMARKER GROUP OPERATION.

2.

SIZE	CONNECT	TO
MAX OF 10 TL	FS1	FS2
FROM 11-20 TL	FS2	FS3
OVER 20 TL	NONE	

ISSUE
5

SFD-10-01-K118

MISCELLANEOUS INPUTS TO
COMPLETING MARKER

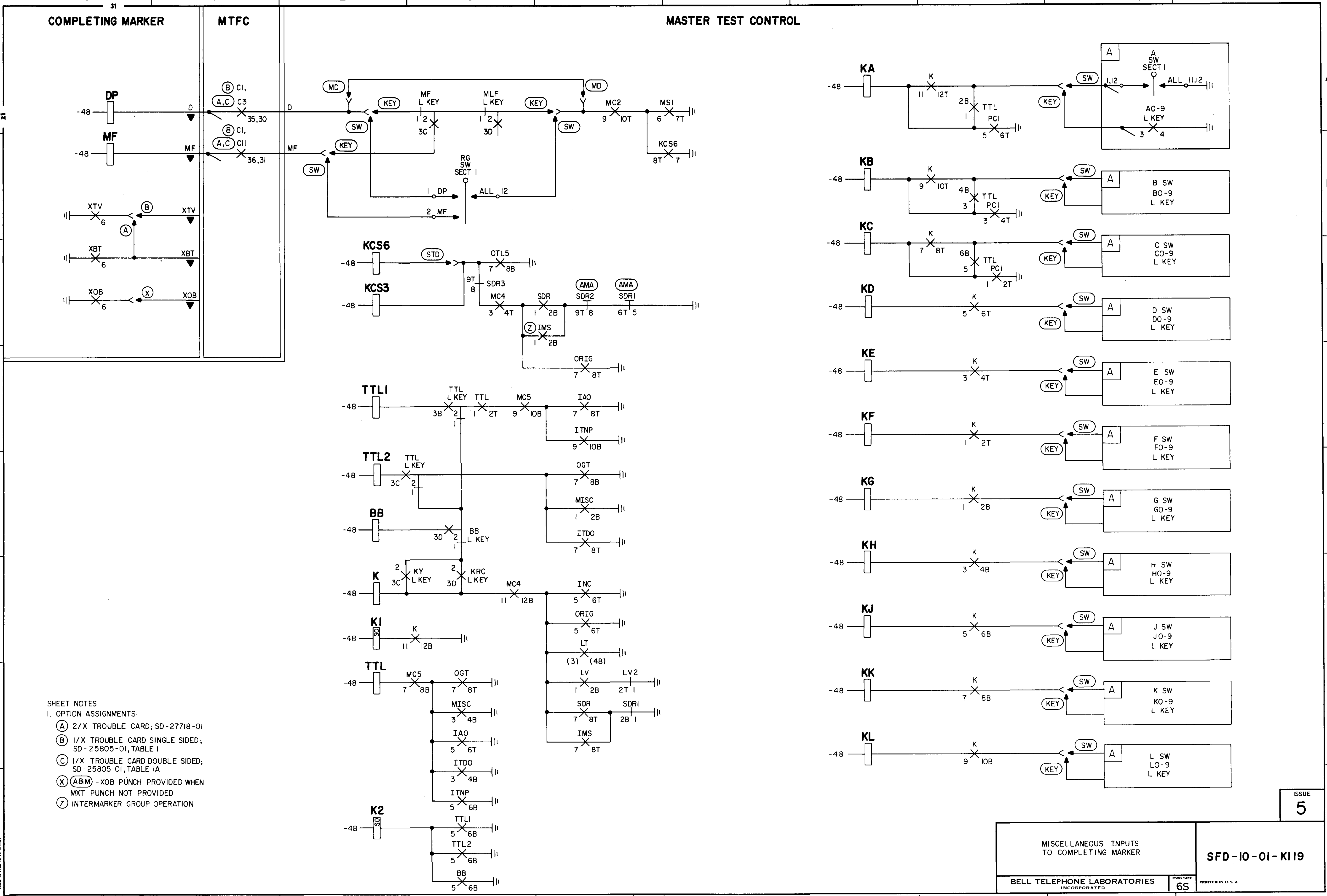
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-71)

SFD-10-01-K118



SHEET NOTES
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
- Ⓧ (A&M) -XOB PUNCH PROVIDED WHEN MXT PUNCH NOT PROVIDED
- Ⓩ INTERMARKER GROUP OPERATION

ISSUE
5

MISCELLANEOUS INPUTS
TO COMPLETING MARKER

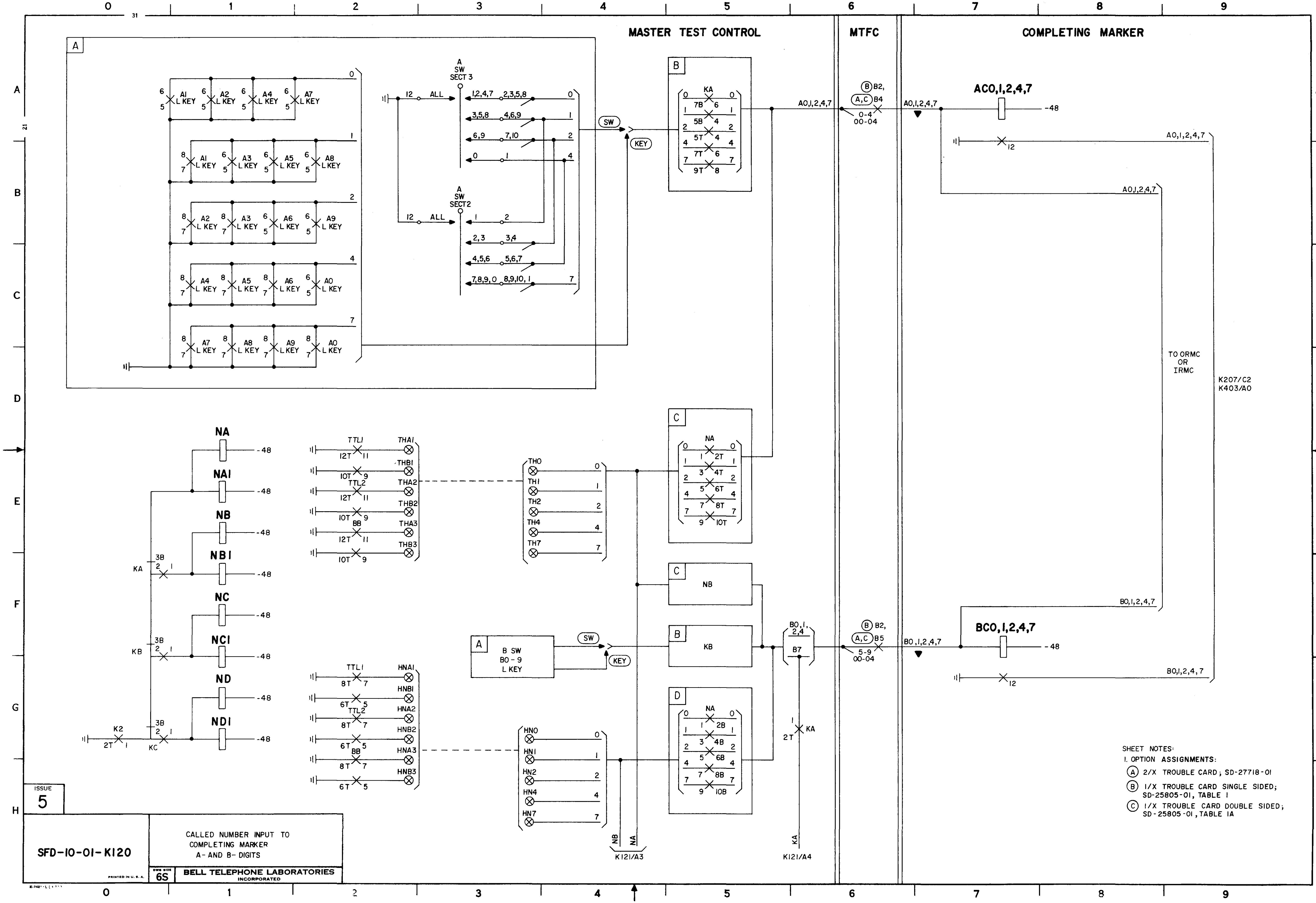
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

SFD-10-01-K119

E-7421 (10-71)



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE 5

SFD-10-01-K120

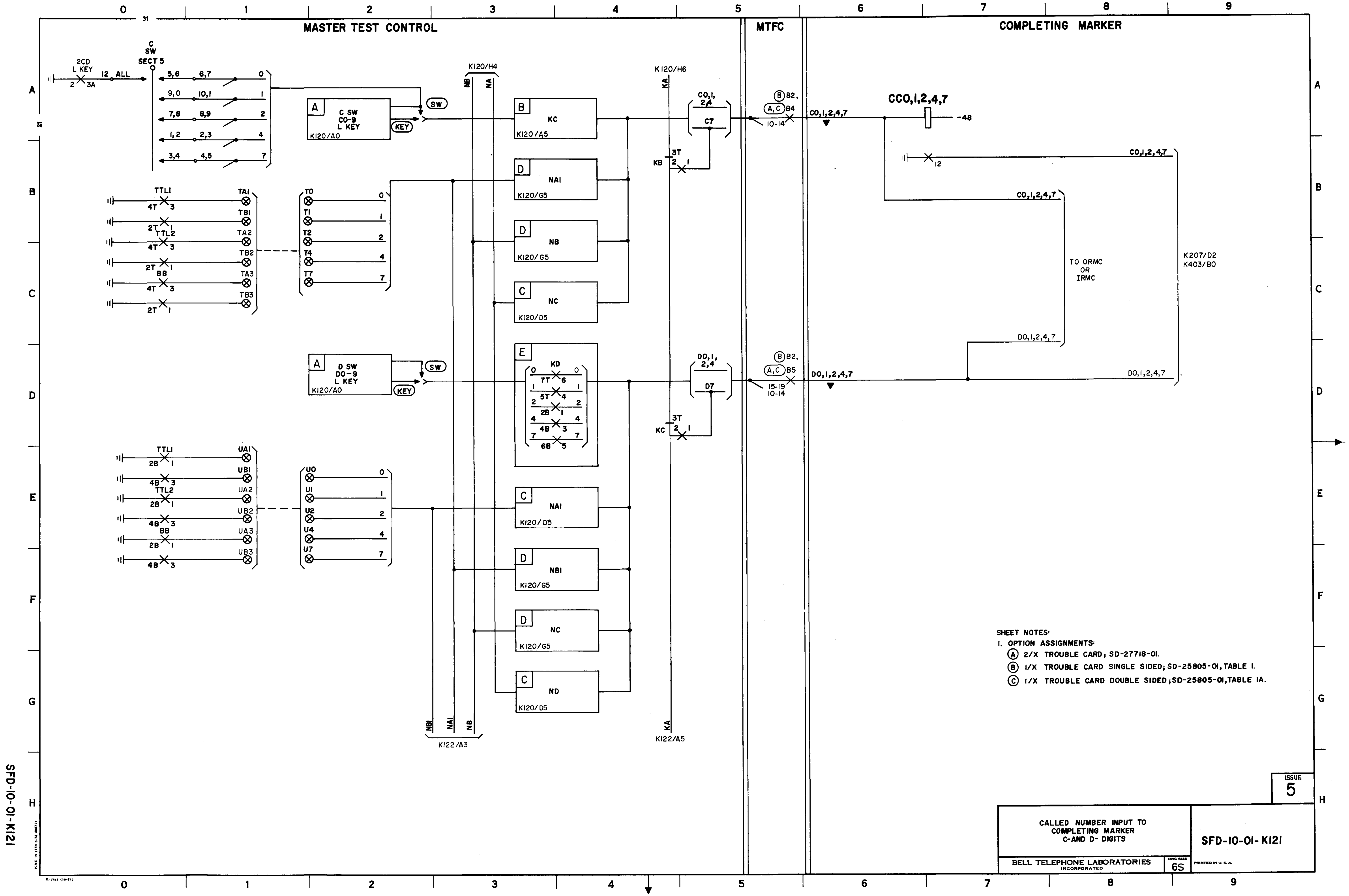
CALLED NUMBER INPUT TO
COMPLETING MARKER
A- AND B- DIGITS

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-K120



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE 5

CALLED NUMBER INPUT TO
COMPLETING MARKER
C-AND D- DIGITS

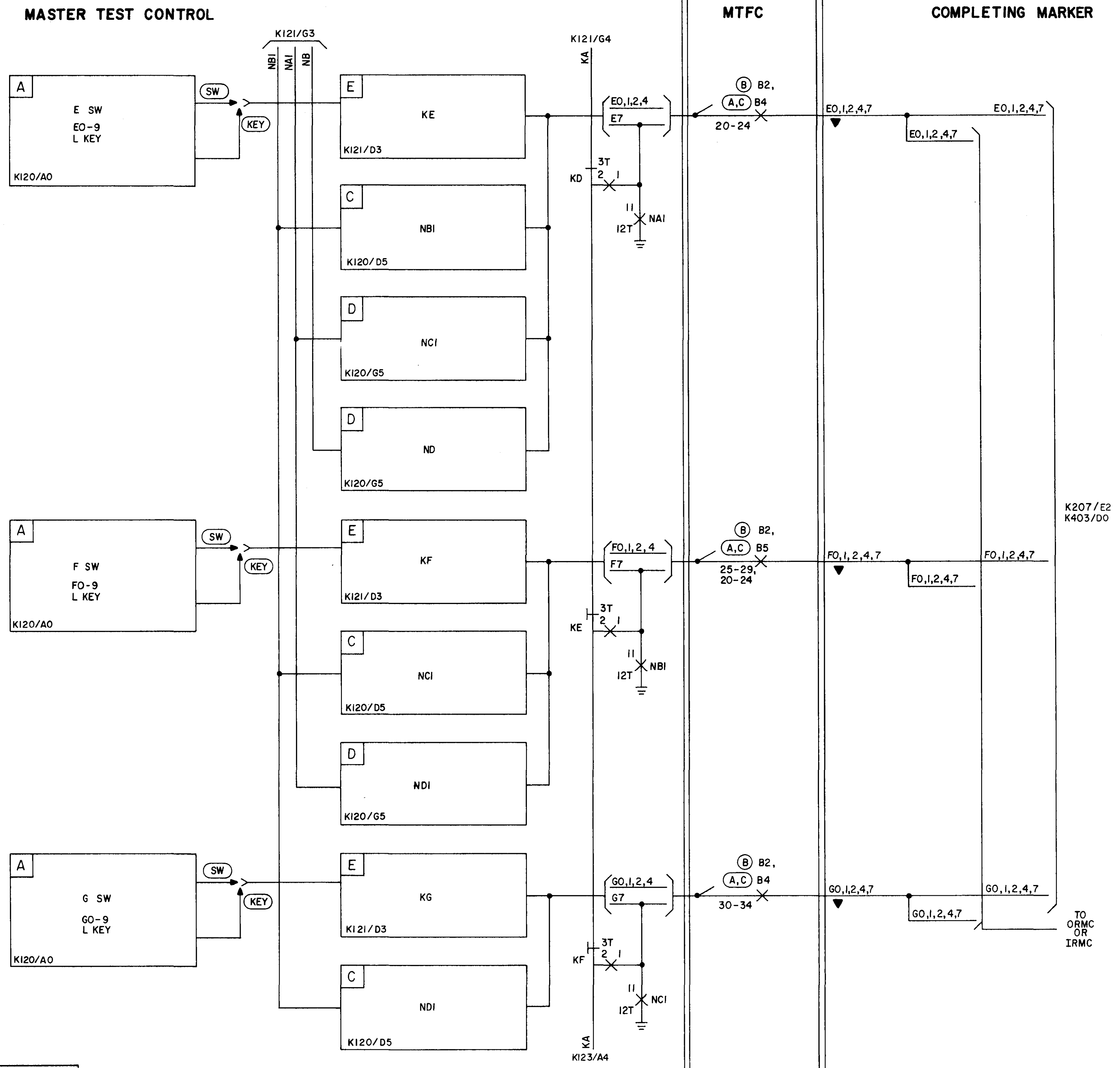
SFD-10-01-K121

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-K121



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE
5

SFD-10-01-K122

CALLED NUMBER INPUT TO
COMPLETING MARKER
E-THROUGH G-DIGITS

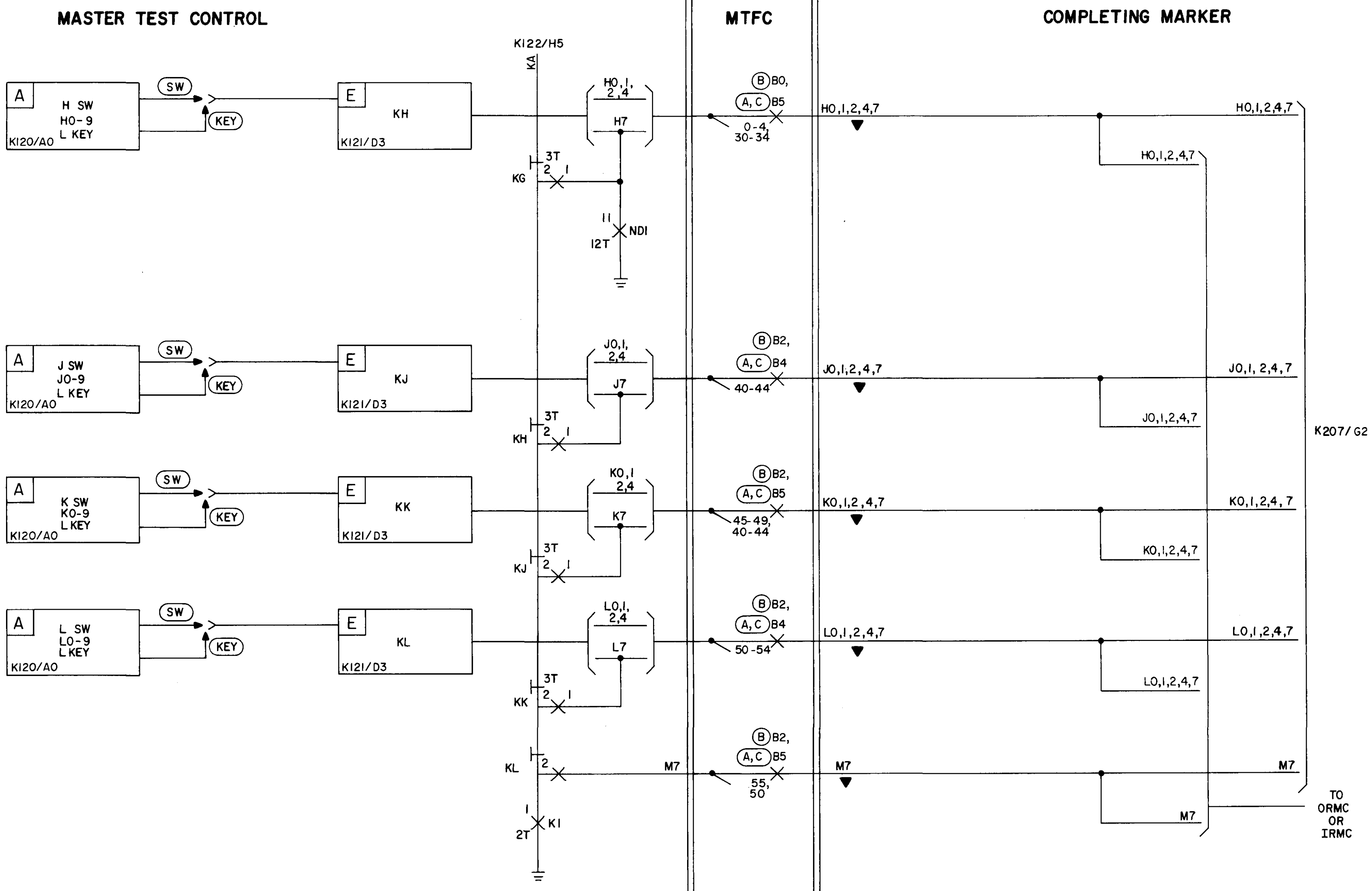
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-73)

SFD-10-01-K122



SHEET NOTES:
1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE	5

CALLED NUMBER INPUT TO
COMPLETING MARKER
H- THROUGH L- DIGITS

SFD-10-01-K123

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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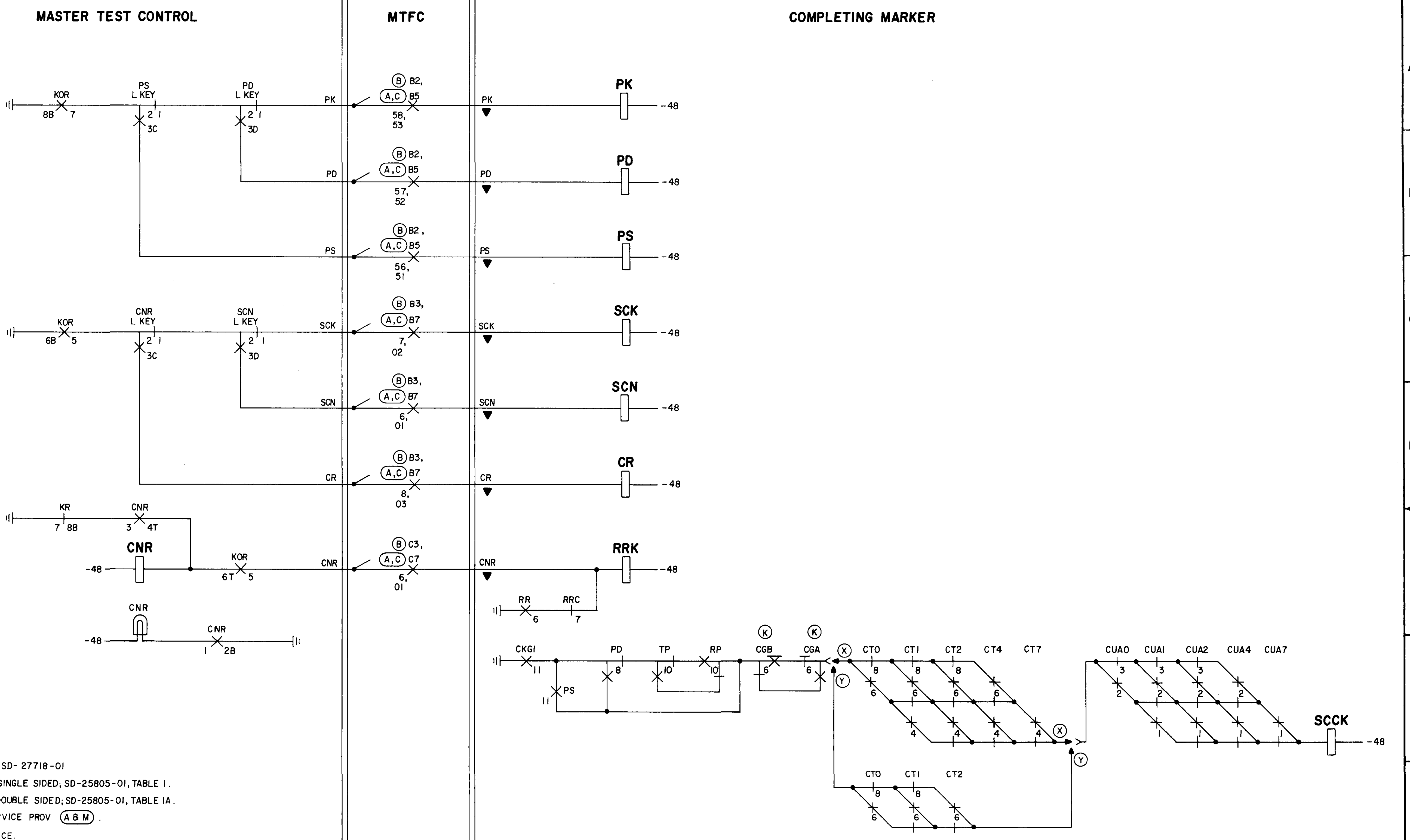

SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
- Ⓚ 60 CLASSES OF SERVICE PROV (A & M).
- Ⓧ 100 CLASSES OF SERVICE.
- Ⓨ 30 CLASSES OF SERVICE.

ISSUE
5

SFD-10-01-K124

COIN, PERMANENT SIGNAL
AND PARTIAL DIAL INPUTS
TO COMPLETING MARKER

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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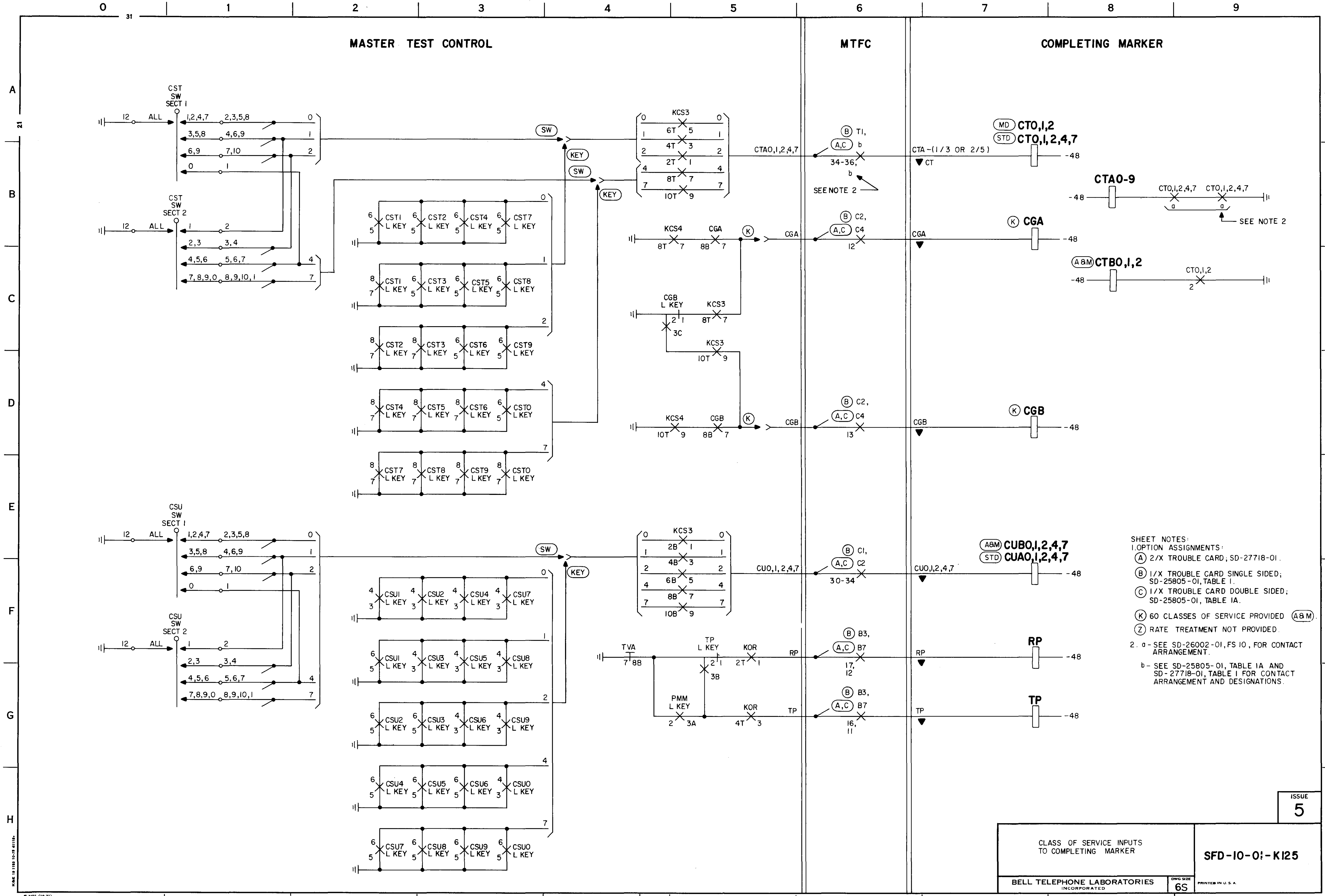
E-7481-L (4-71)

SFD-10-01-K124



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
   - Ⓚ 60 CLASSES OF SERVICE PROVIDED (A&M).
   - Ⓩ RATE TREATMENT NOT PROVIDED.
2. a - SEE SD-26002-01, FS 10, FOR CONTACT ARRANGEMENT.

   b - SEE SD-25805-01, TABLE 1A AND SD-27718-01, TABLE 1 FOR CONTACT ARRANGEMENT AND DESIGNATIONS.

ISSUE
5

CLASS OF SERVICE INPUTS
TO COMPLETING MARKER

SFD-10-01-K125

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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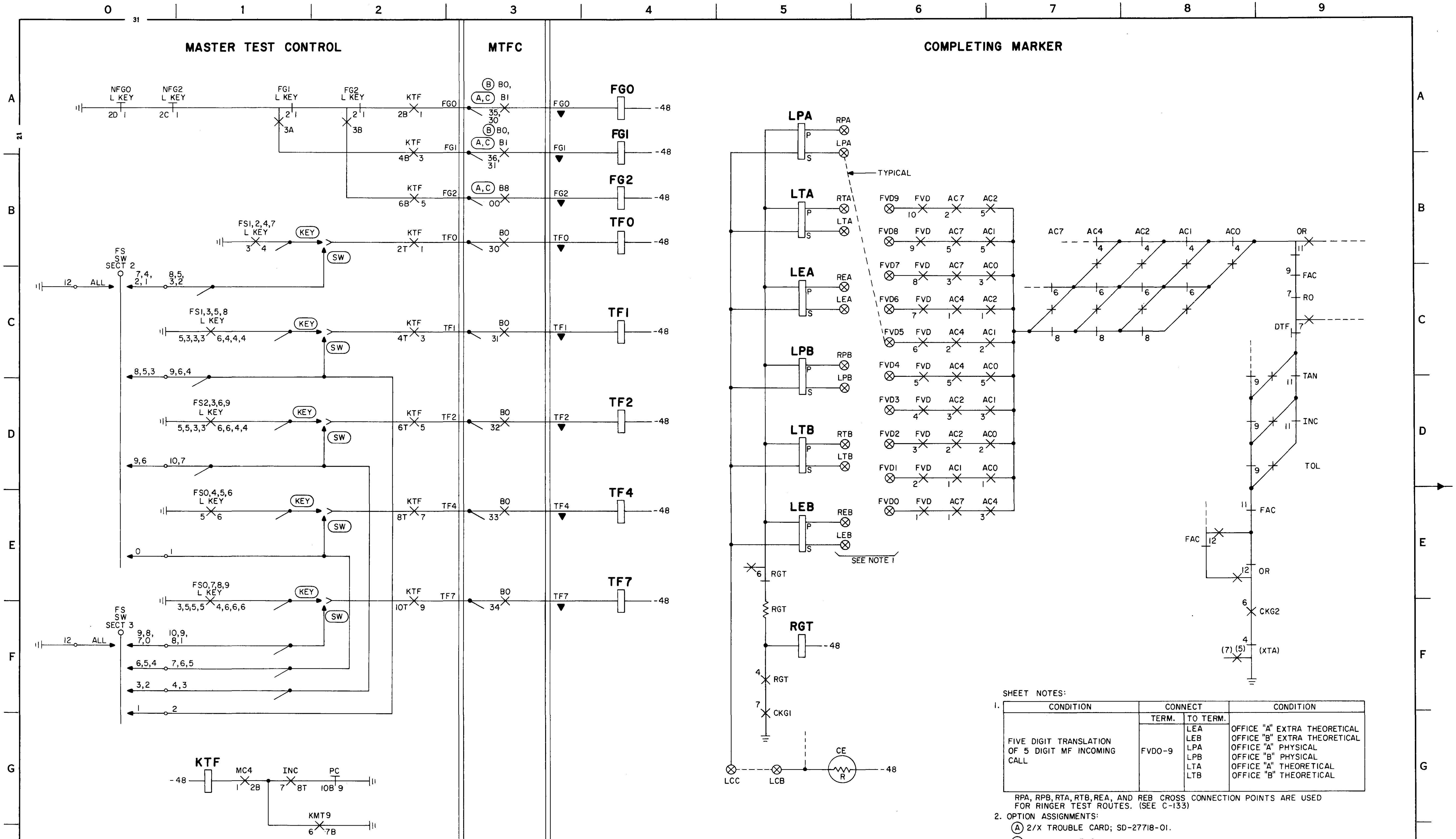
SFD-10-01-K125



SHEET NOTES:

1.

CONDITION	CONNECT		CONDITION
	TERM.	TO TERM.	
FIVE DIGIT TRANSLATION OF 5 DIGIT MF INCOMING CALL	FVDO-9	LEA	OFFICE "A" EXTRA THEORETICAL
		LEB	OFFICE "B" EXTRA THEORETICAL
		LPA	OFFICE "A" PHYSICAL
		LPB	OFFICE "B" PHYSICAL
		LTA	OFFICE "A" THEORETICAL
		LTB	OFFICE "B" THEORETICAL

RPA, RPB, RTA, RTB, REA, AND REB CROSS CONNECTION POINTS ARE USED FOR RINGER TEST ROUTES. (SEE C-133)

2. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

TRUNK LINK FRAME INPUT
TO COMPLETING MARKER
(INC CLASS)

SFD-10-01-K127

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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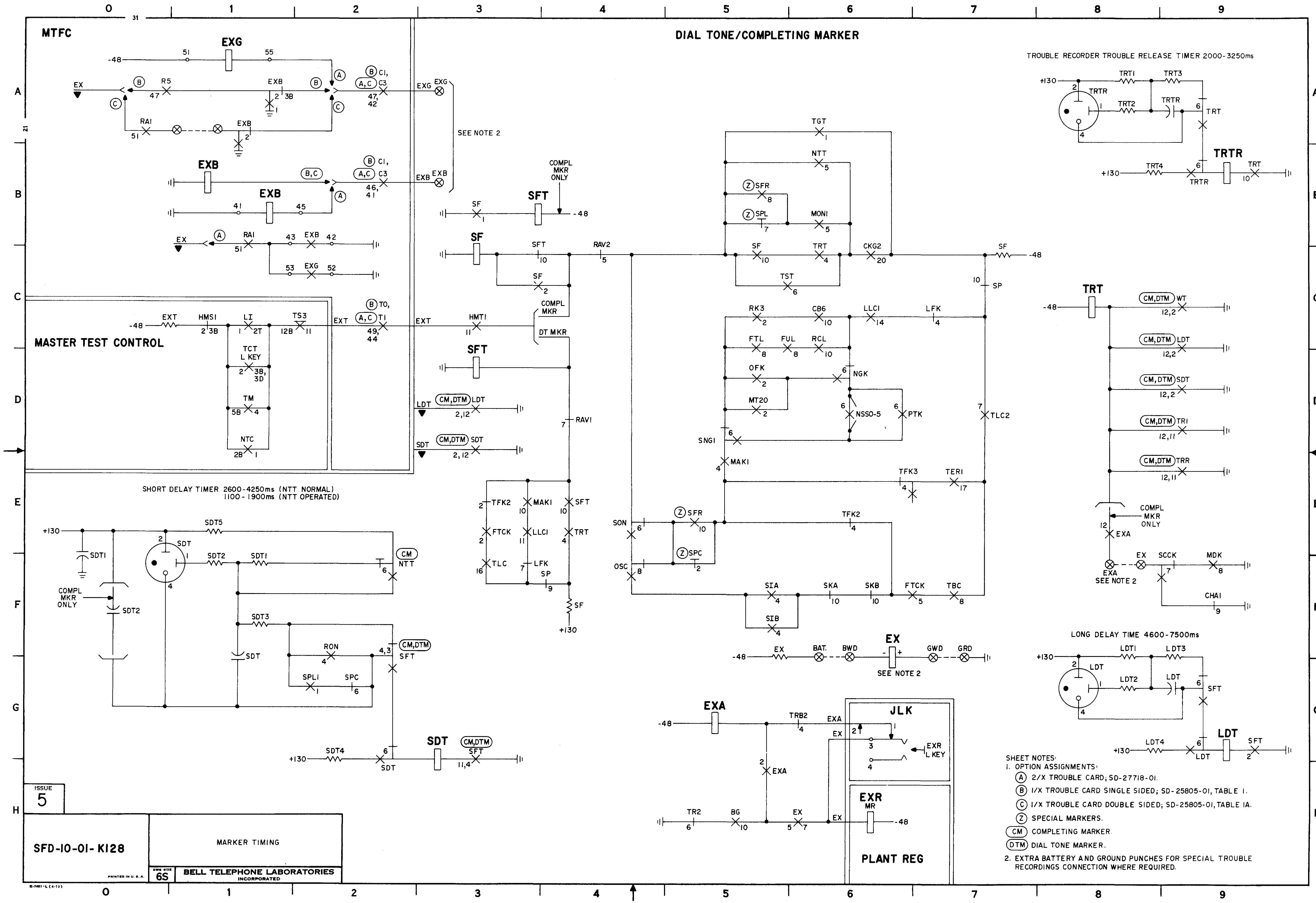
E-7421 (10-71)

SFD-10-01-K127



SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01.
- Ⓑ I/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
- Ⓒ I/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
- Ⓩ SPECIAL MARKERS.
- (CM) COMPLETING MARKER.
- (DTM) DIAL TONE MARKER.

2. EXTRA BATTERY AND GROUND PUNCHES FOR SPECIAL TROUBLE RECORDINGS CONNECTION WHERE REQUIRED.

ISSUE
5

SFD-10-01-K128

MARKER TIMING

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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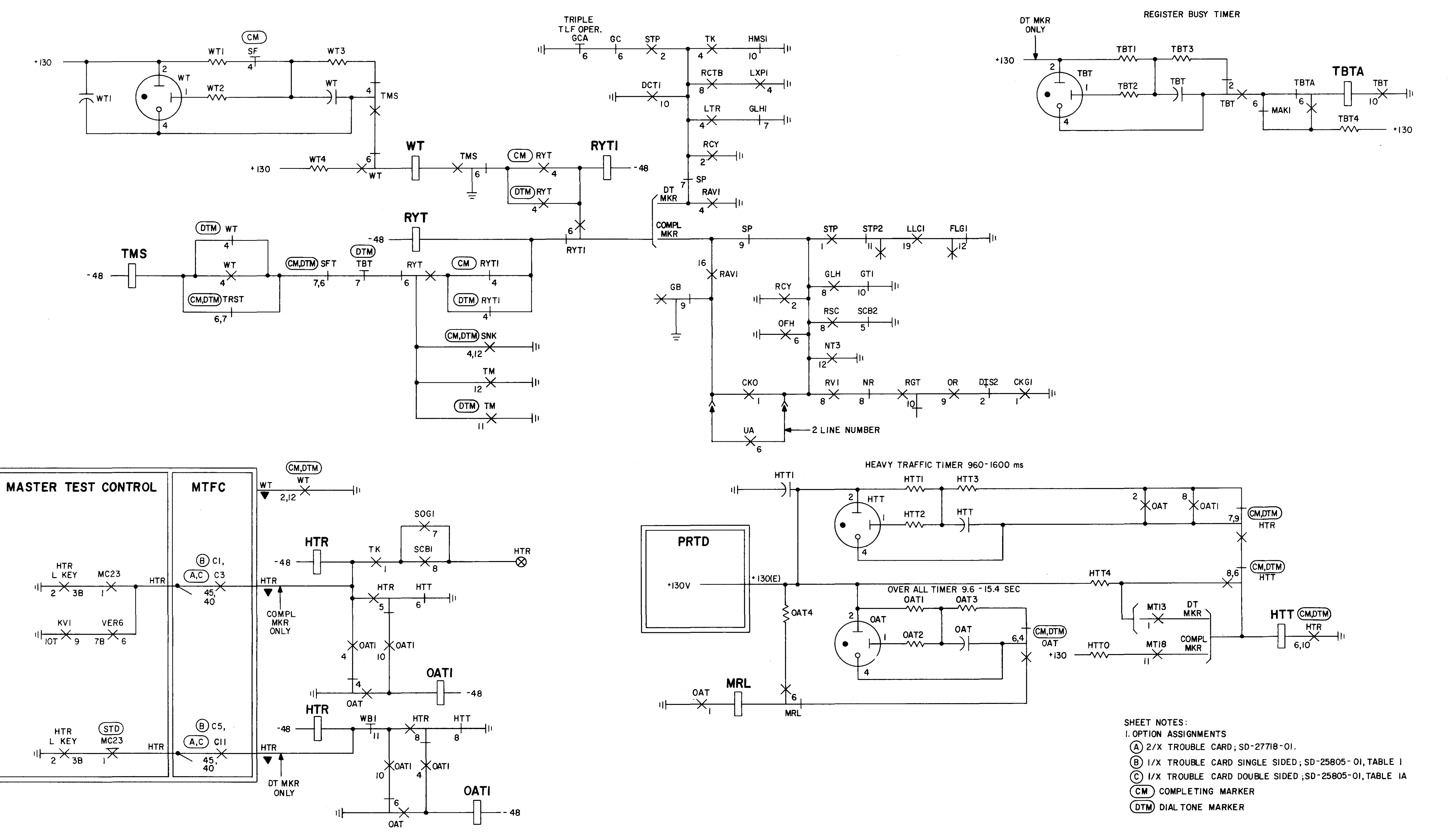
E-7461-L (4-73)

SFD-10-01-K128

DIAL TONE/COMPLETING MARKER



SHEET NOTES:

1. OPTION ASSIGNMENTS
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
   - (CM) COMPLETING MARKER
   - (DTM) DIAL TONE MARKER

ISSUE
5

MARKER TIMING

SFD-10-01-K129

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-K129

E-7421 (10-71)

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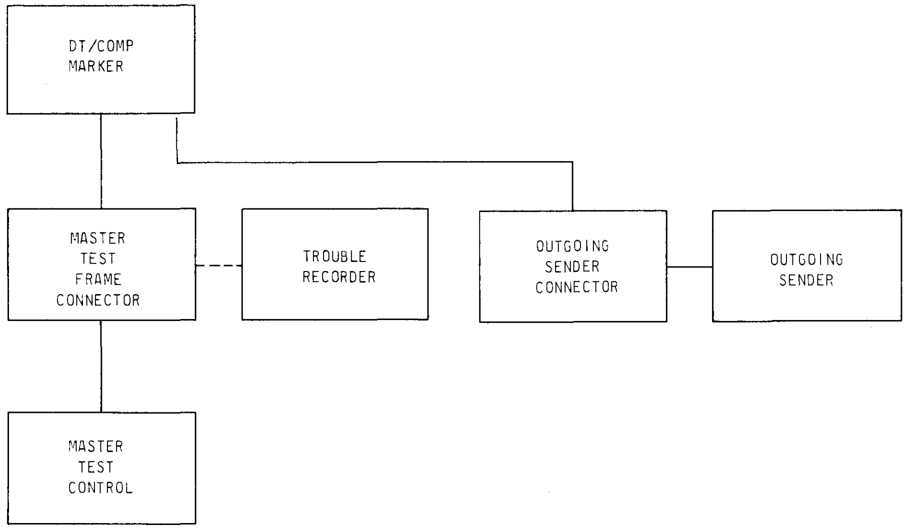
K204	SENDER SUBGROUP SELECTION
K205	SENDER CONTROL
K206	SENDER CONTROL
K207	CALLED NUMBER TRANSFER TO SENDER
K208	SENDER NO DIGIT AND TRUNK TT RELAY CONTROL



CAUTION!

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ISSUE
5

PART K2
SENDER SELECTION

SFD-10-01-K201

BELL TELEPHONE LABORATORIES
INCORPORATED

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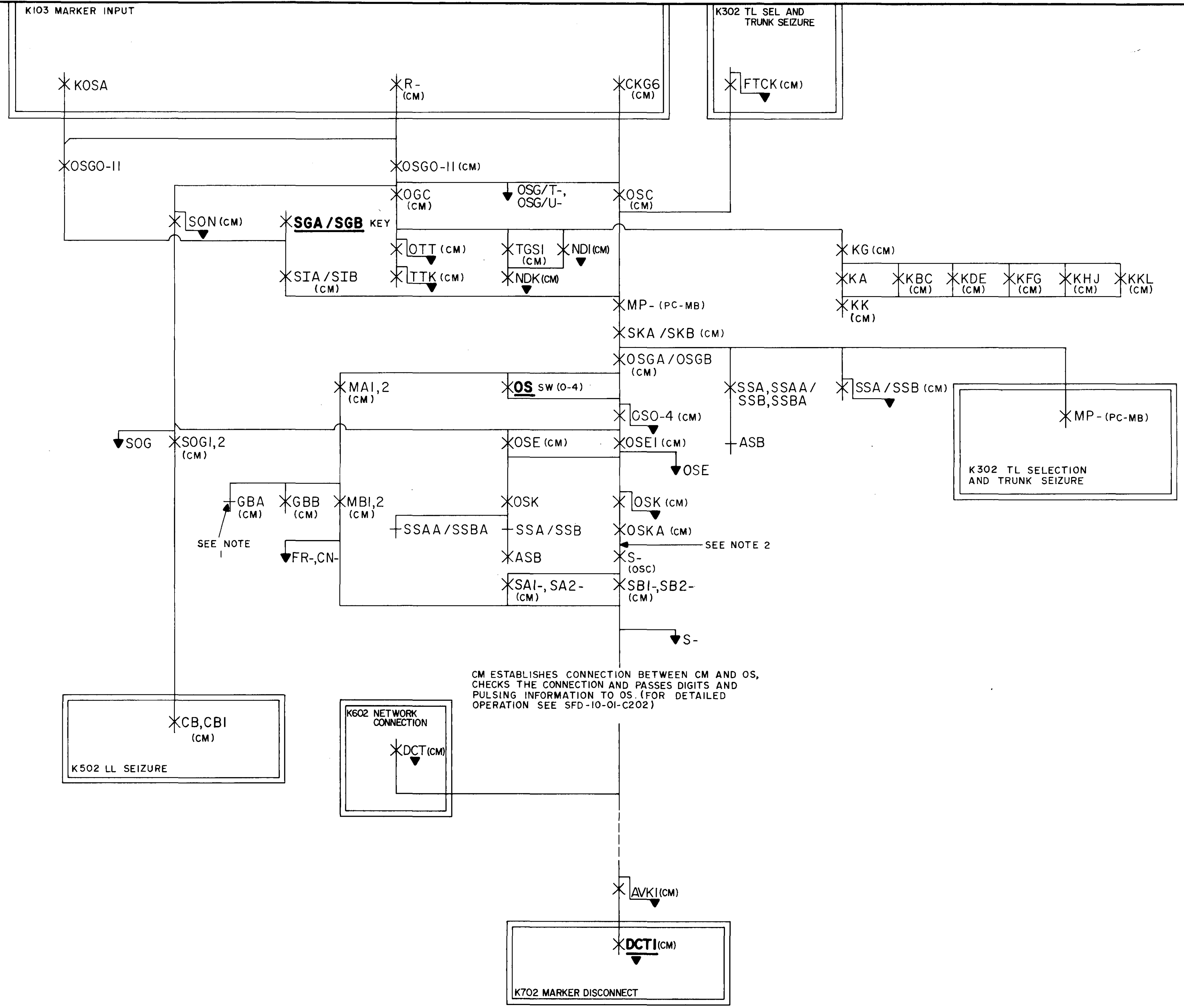

SHEET NOTES:

1. GBA RELAY WILL NOT OPERATE IF OS SUBGROUP A IS SELECTED.
2. ONE S RELAY PER SENDER PER MARKER (INDIVIDUAL CHANNEL BETWEEN A PARTICULAR SENDER AND A PARTICULAR MARKER).

ISSUE
5

SFD-10-01-K202

SEQUENCE CHART
SENDER SELECTION

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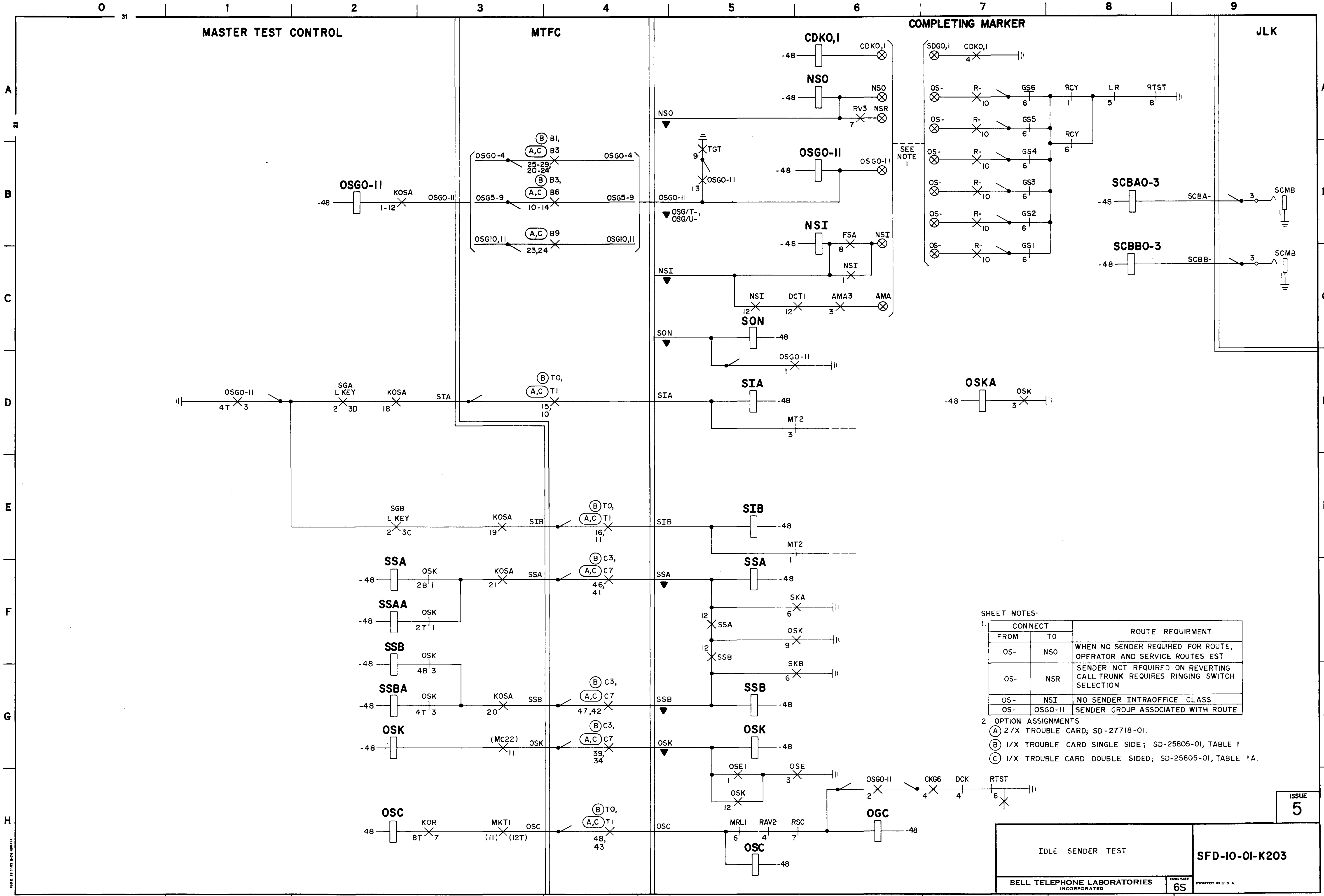
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-K202



SHEET NOTES:

1.

CONNECT		ROUTE REQUIRMENT
FROM	TO	
OS-	NSO	WHEN NO SENDER REQUIRED FOR ROUTE, OPERATOR AND SERVICE ROUTES EST
OS-	NSR	SENDER NOT REQUIRED ON REVERTING CALL TRUNK REQUIRES RINGING SWITCH SELECTION
OS-	NSI	NO SENDER INTRAOFFICE CLASS
OS-	OSGO-11	SENDER GROUP ASSOCIATED WITH ROUTE

2. OPTION ASSIGNMENTS

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDE; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE 5

IDLE SENDER TEST

SFD-10-01-K203

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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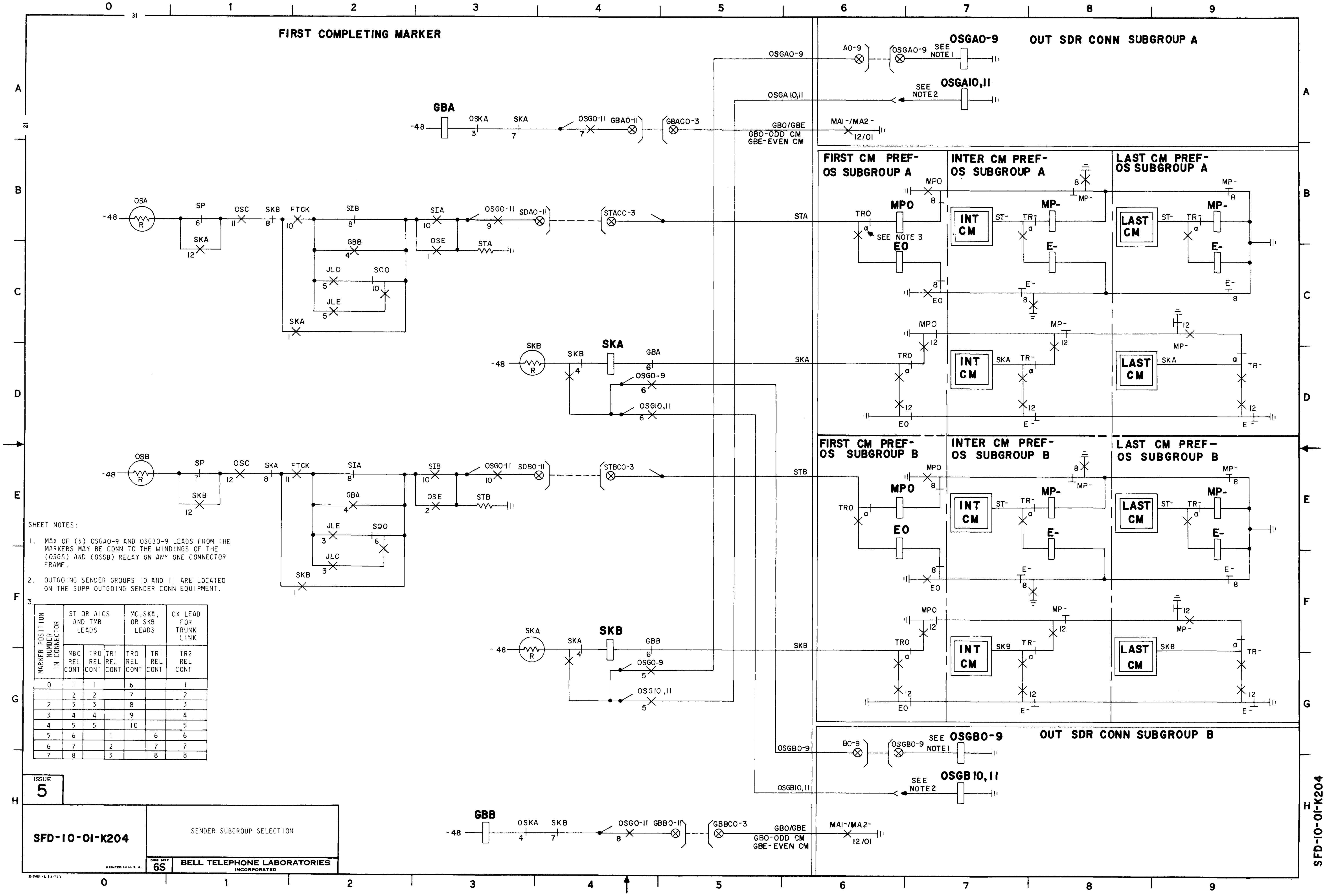

SHEET NOTES:

1. MAX OF (5) OSGAO-9 AND OSGBO-9 LEADS FROM THE MARKERS MAY BE CONN TO THE WINDINGS OF THE (OSGA) AND (OSGB) RELAY ON ANY ONE CONNECTOR FRAME.

2. OUTGOING SENDER GROUPS 10 AND 11 ARE LOCATED ON THE SUPP OUTGOING SENDER CONN EQUIPMENT.

3.

MARKER POSITION NUMBER IN CONNECTOR	ST OR AICS AND TMB LEADS			MC, SKA, OR SKB LEADS		CK LEAD FOR TRUNK LINK
	MBO REL CONT	TRO REL CONT	TRI REL CONT	TRO REL CONT	TRI REL CONT	TR2 REL CONT
0	1	1		6		1
1	2	2		7		2
2	3	3		8		3
3	4	4		9		4
4	5	5		10		5
5	6		1		6	6
6	7		2		7	7
7	8		3		8	8

ISSUE
5

SFD-10-01-K204

SENDER SUBGROUP SELECTION

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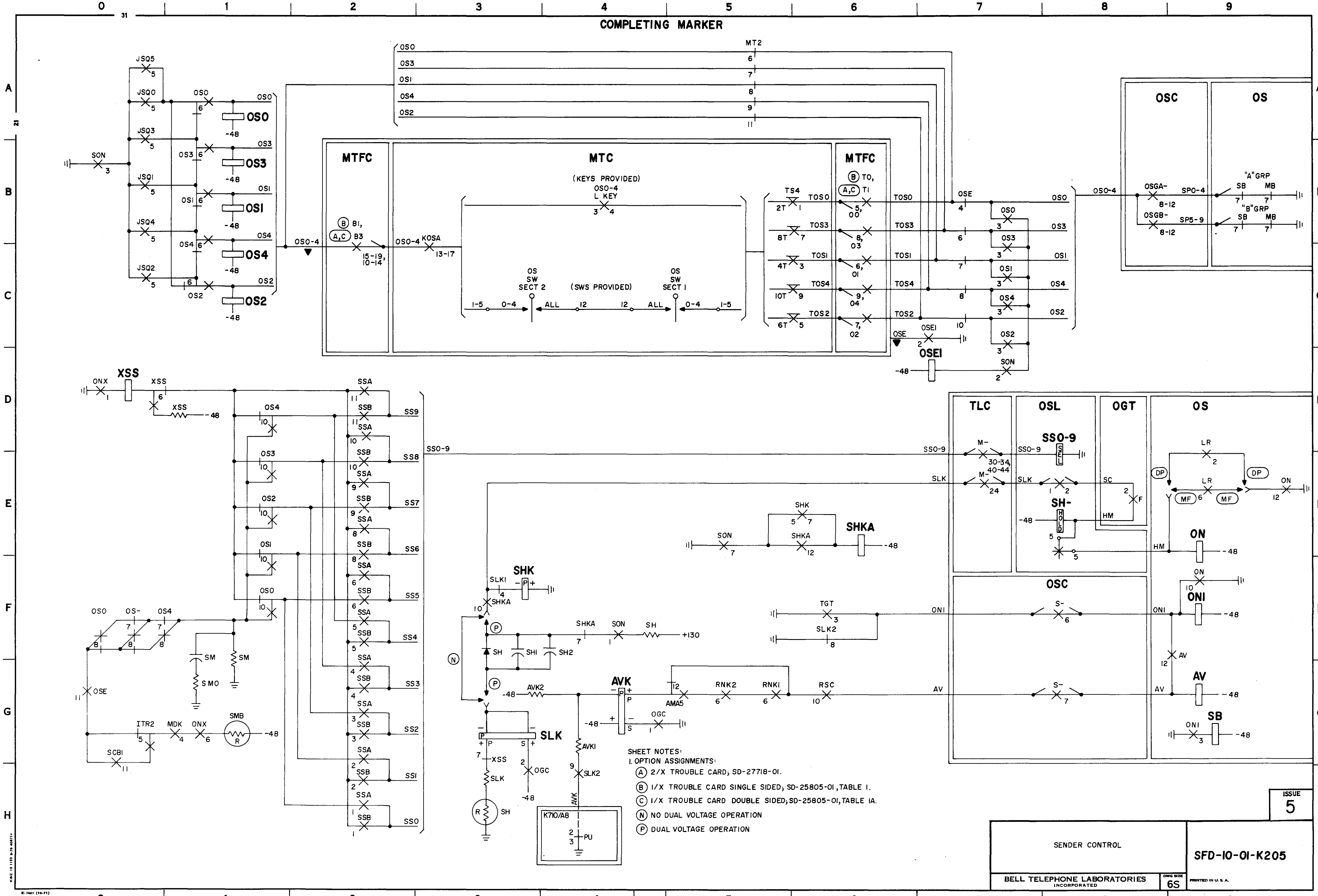
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

Ⓝ NO DUAL VOLTAGE OPERATION

Ⓟ DUAL VOLTAGE OPERATION

ISSUE 5

SENDER CONTROL

SFD-10-01-K205

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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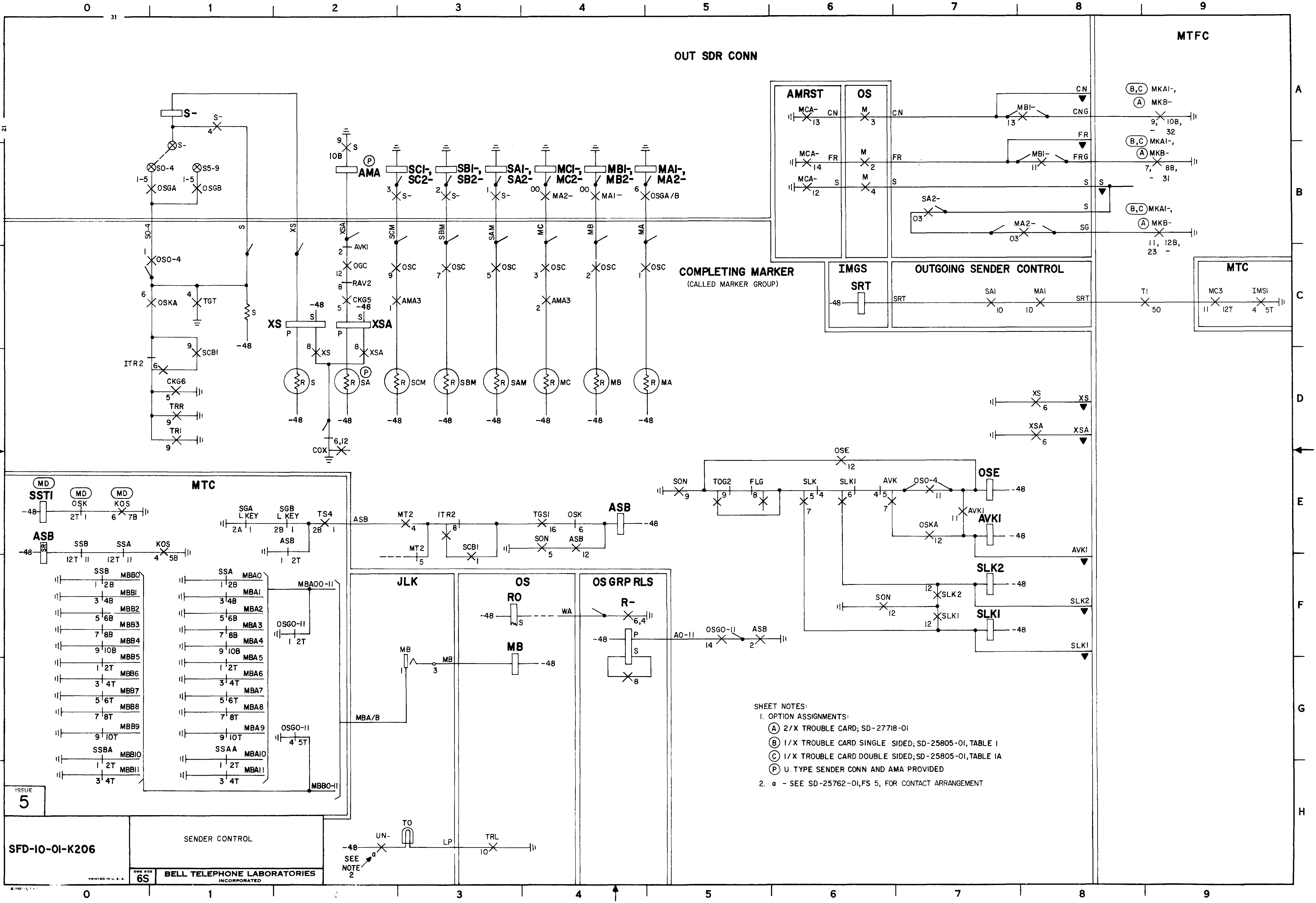
SFD-10-01-K205



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
   - Ⓟ U TYPE SENDER CONN AND AMA PROVIDED
2. a - SEE SD-25762-01, FS 5, FOR CONTACT ARRANGEMENT

ISSUE 5

SFD-10-01-K206

SENDER CONTROL

6S

BELL TELEPHONE LABORATORIES
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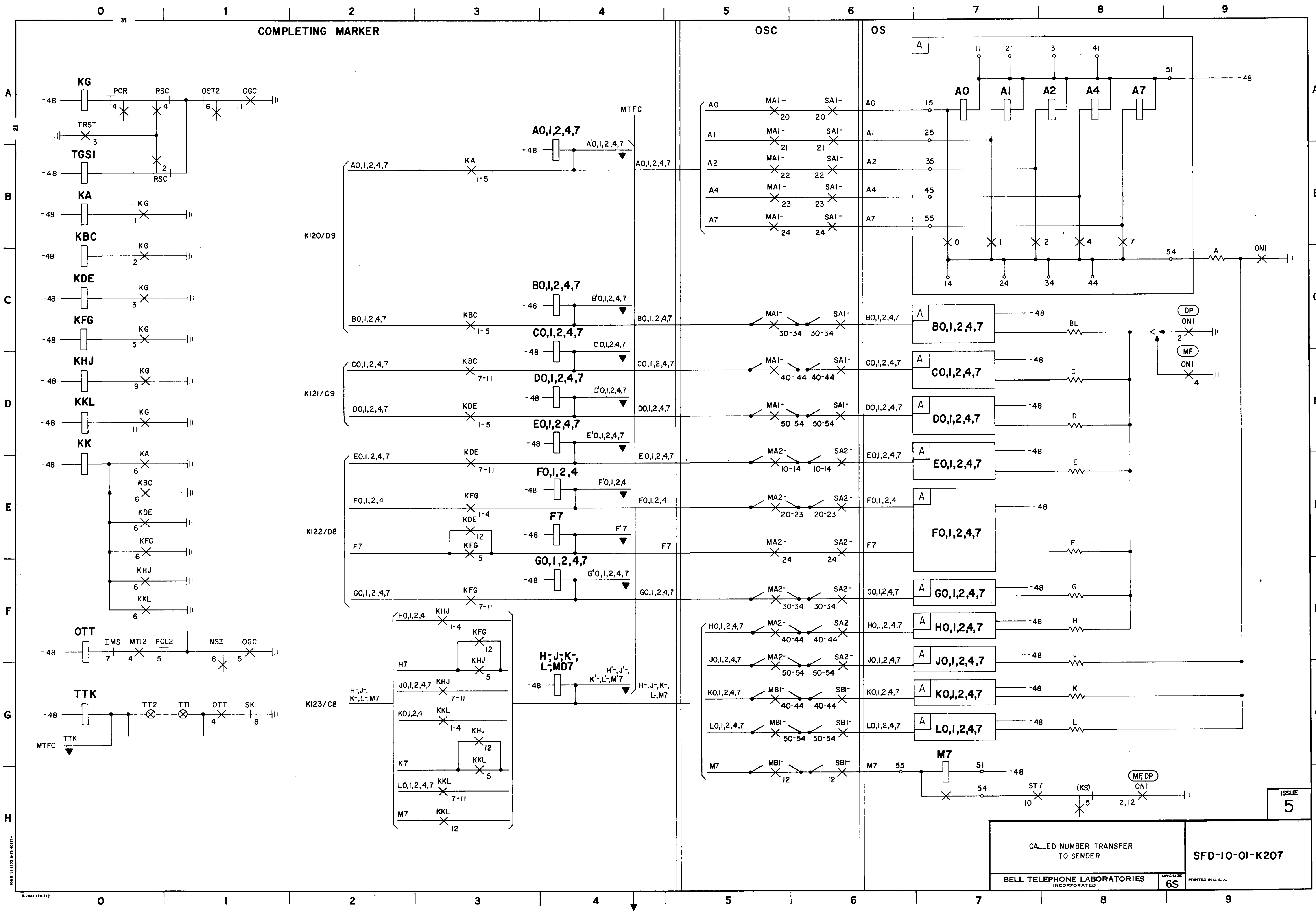
SFD-10-01-K206



CALLED NUMBER TRANSFER
TO SENDER

SFD-10-01-K207

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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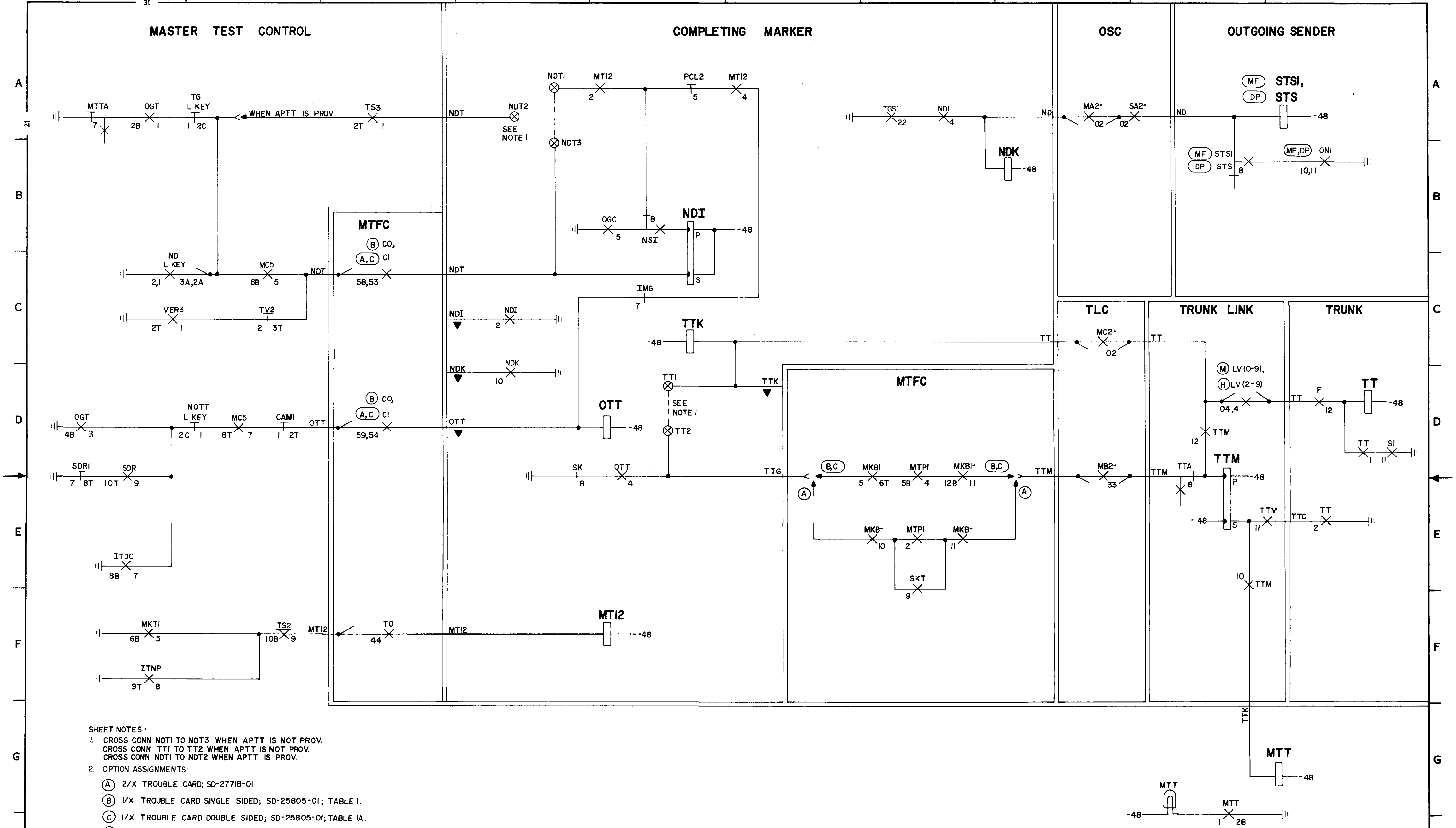
ISSUE 5



SHEET NOTES:

1. CROSS CONN NDT1 TO NDT3 WHEN APTT IS NOT PROV.
   CROSS CONN TT1 TO TT2 WHEN APTT IS NOT PROV.
   CROSS CONN NDT1 TO NDT2 WHEN APTT IS PROV.
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01; TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01; TABLE IA.
   - Ⓗ SD-26032-01 (TL)
   - Ⓜ SD-27879-01 (TL)

ISSUE
5

SFD-10-01-K208

SENDER NO DIGIT AND
TRUNK TT RELAY CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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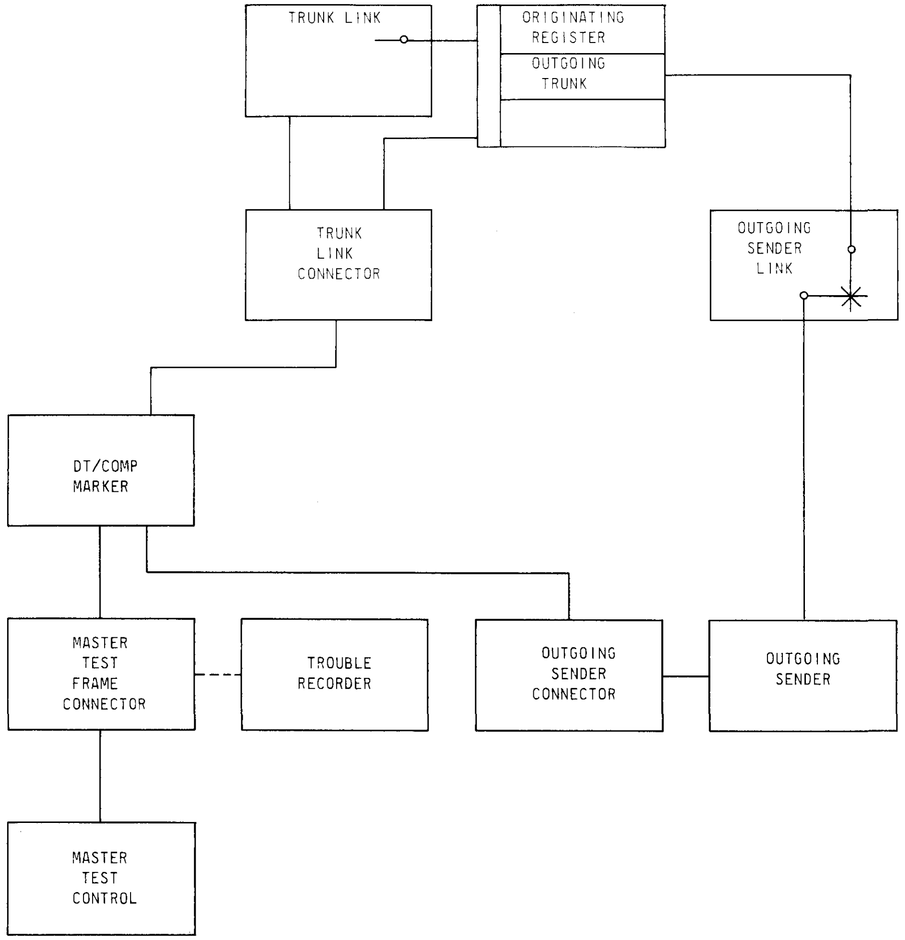
E-7481-L (4-73)



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K302	SEQUENCE CHART - TRUNK LINK SELECTION AND TRUNK SEIZURE (DT/ORIG CLASS)
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K305	IDLE TRUNK TEST (ORIG CLASS)
K306	TRUNK LINK FRAME SEIZURE (DT CLASS)
K307	TRUNK LINK FRAME SEIZURE (ORIG/INC CLASS)
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K309	TRUNK LINK FRAME MEMORY
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K311	TRUNK SELECTION (ORIG CLASS)
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K314	TRUNK CHARGING (ORIG CLASS)
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K317	OPERATION OF CONTROL RELAYS IN TRUNK LINK FRAME

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART K3
TRUNK LINK SELECTION AND
TRUNK SEIZURE

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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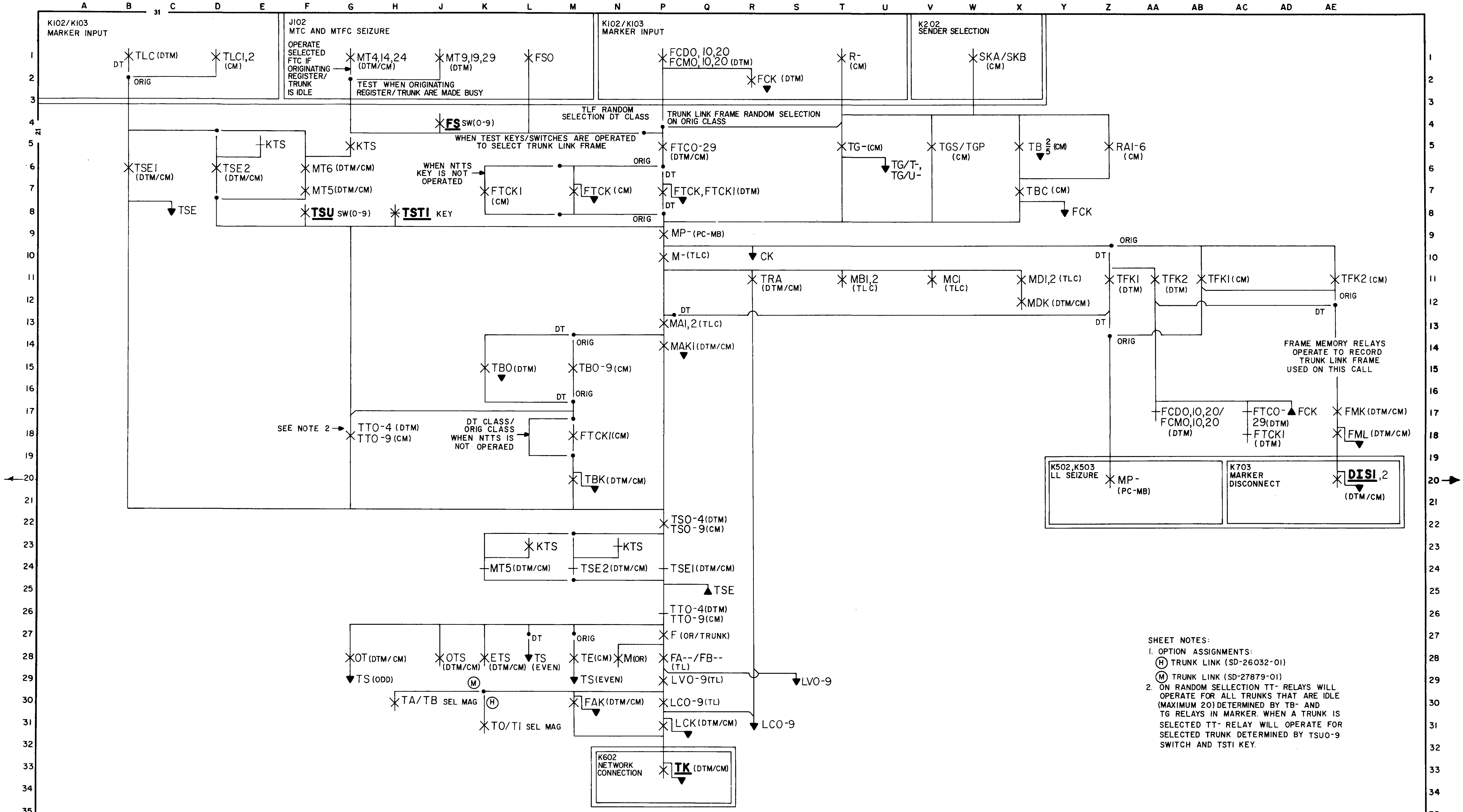
SFD-10-01-K301



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   Ⓗ TRUNK LINK (SD-26032-01)
   Ⓜ TRUNK LINK (SD-27879-01)
2. ON RANDOM SELLECTION TT- RELAYS WILL OPERATE FOR ALL TRUNKS THAT ARE IDLE (MAXIMUM 20) DETERMINED BY TB- AND TG RELAYS IN MARKER. WHEN A TRUNK IS SELECTED TT- RELAY WILL OPERATE FOR SELECTED TRUNK DETERMINED BY TSUO-9 SWITCH AND TSTI KEY.

ISSUE
5

SFD-10-01-K302

SEQUENCE CHART
TRUNK LINK SELECTION
AND TRUNK SEIZURE
(DT/ORIG CLASS)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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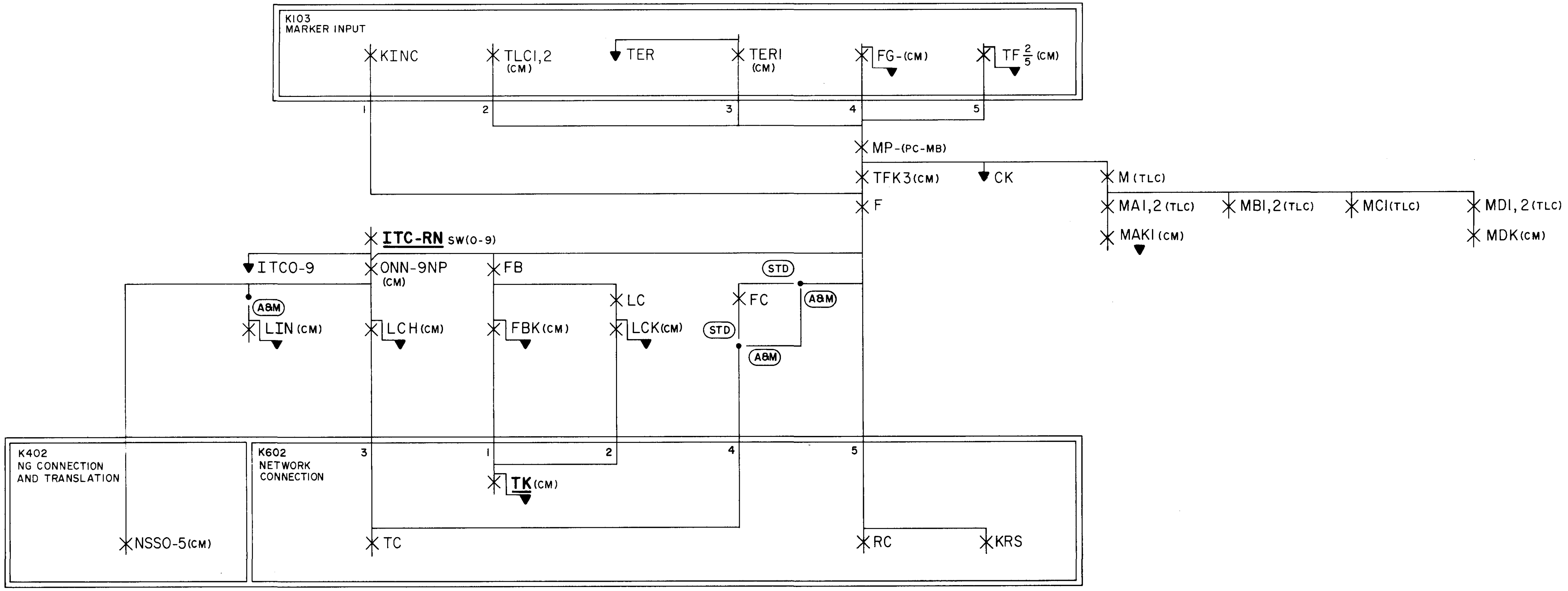
E-7481-L (4-73)

SFD-10-01-K302



SEQUENCE CHART
TRUNK LINK SEIZURE
AND TRUNK SIMULATION
(INC CLASS)

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

SFD-10-01-K303

ISSUE
5

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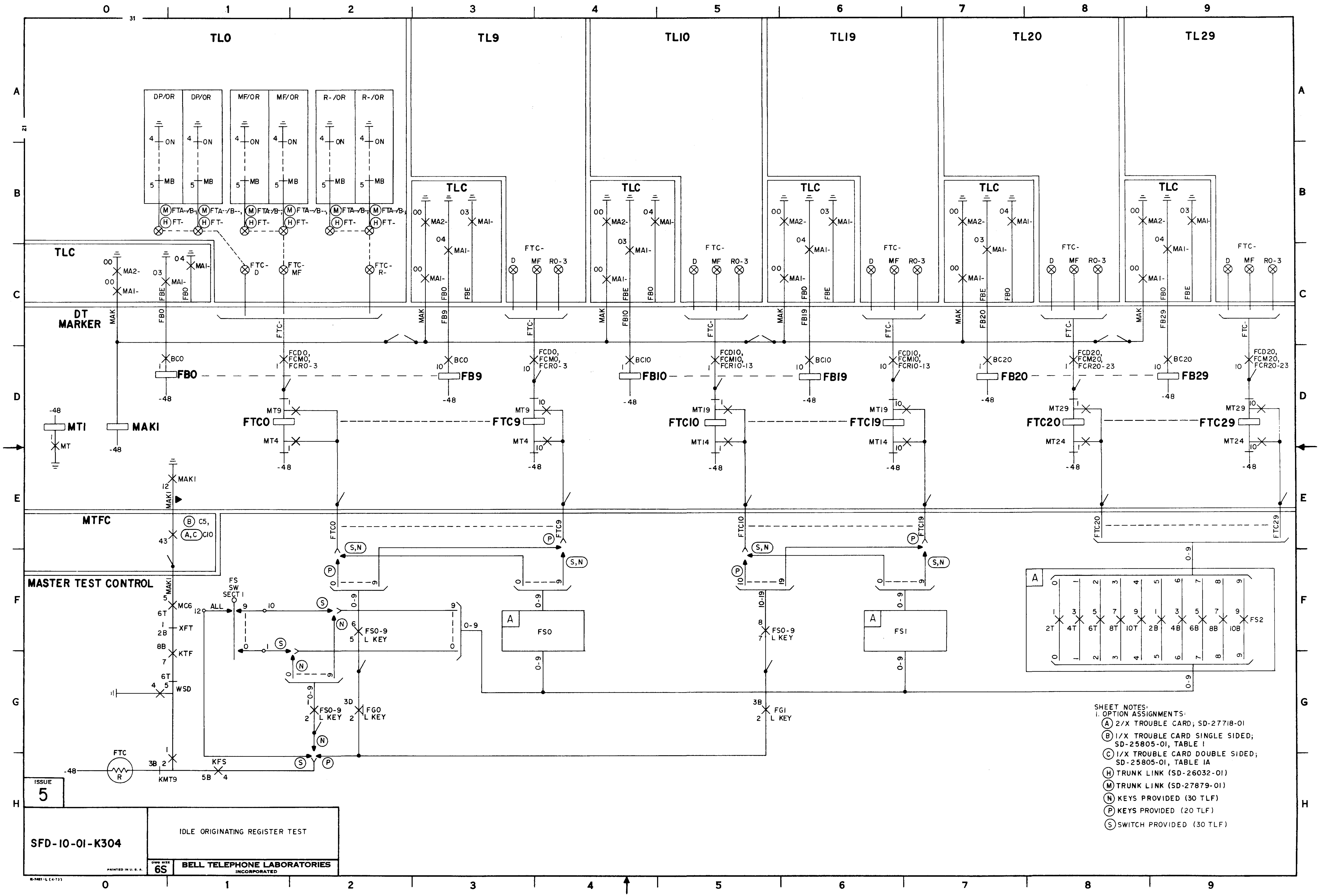
SFD-10-01-K303



SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
- Ⓗ TRUNK LINK (SD-26032-01)
- Ⓜ TRUNK LINK (SD-27879-01)
- Ⓝ KEYS PROVIDED (30 TLF)
- Ⓟ KEYS PROVIDED (20 TLF)
- Ⓢ SWITCH PROVIDED (30 TLF)

ISSUE
5

SFD-10-01-K304

IDLE ORIGINATING REGISTER TEST

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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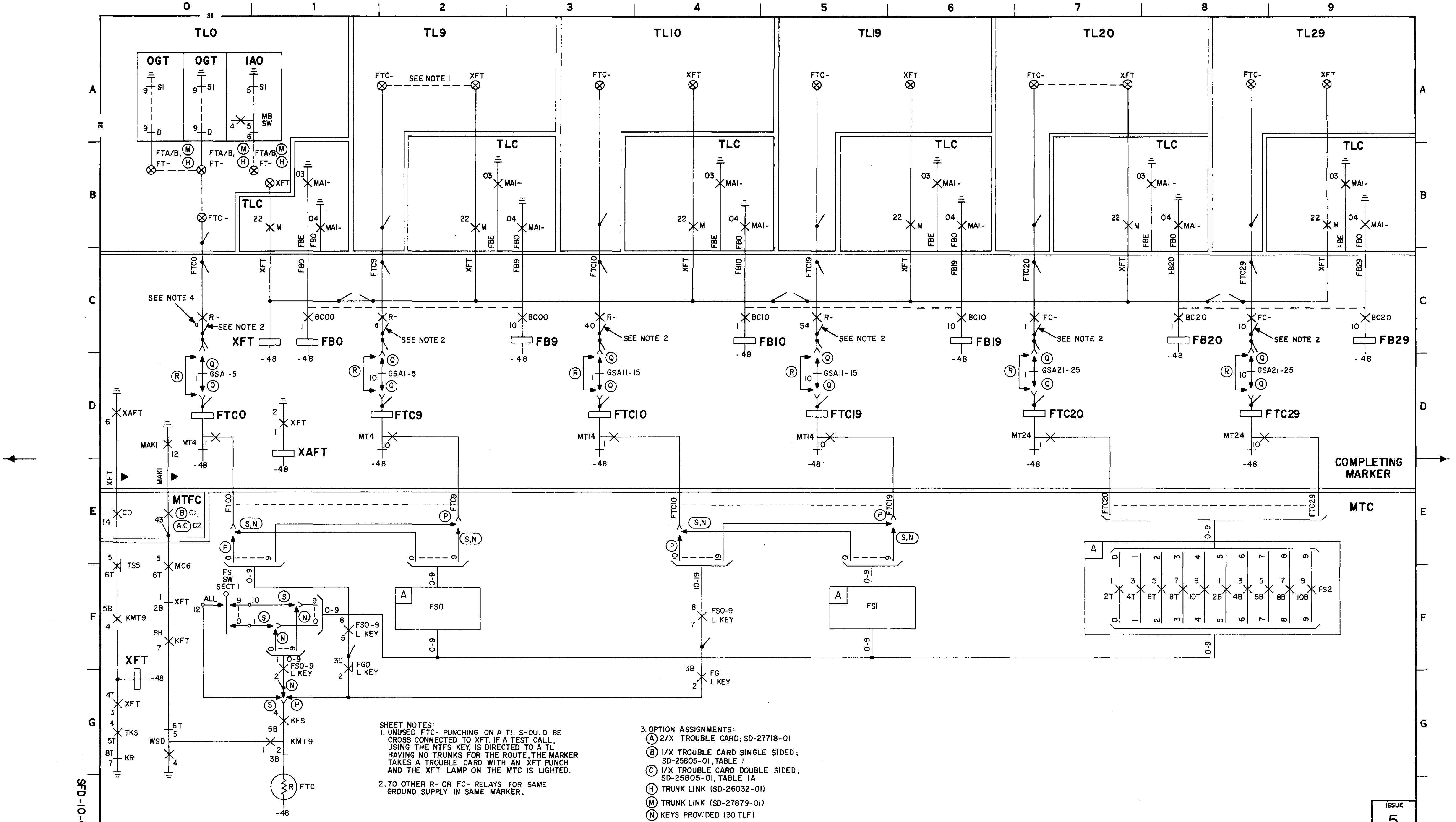
E-7481-L (4-73)

SFD-10-01-K304



SHEET NOTES:
1. UNUSED FTC- PUNCHING ON A TL SHOULD BE CROSS CONNECTED TO XFT. IF A TEST CALL, USING THE NTFS KEY, IS DIRECTED TO A TL HAVING NO TRUNKS FOR THE ROUTE, THE MARKER TAKES A TROUBLE CARD WITH AN XFT PUNCH AND THE XFT LAMP ON THE MTC IS LIGHTED.

2. TO OTHER R- OR FC- RELAYS FOR SAME GROUND SUPPLY IN SAME MARKER.

3. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
- Ⓗ TRUNK LINK (SD-26032-01)
- Ⓜ TRUNK LINK (SD-27879-01)
- Ⓝ KEYS PROVIDED (30 TLF)
- Ⓟ KEYS PROVIDED (20 TLF)
- Ⓠ GROUND SUPPLY 1-5
- Ⓡ GROUND SUPPLY 6
- Ⓢ SWITCH PROVIDED (30 TLF)

4. a- SEE SD-26002-01, FS 20, FOR CONTACT ARRANGEMENT.

ISSUE
5

IDLE TRUNK TEST
(ORIG CLASS)

SFD-10-01-K305

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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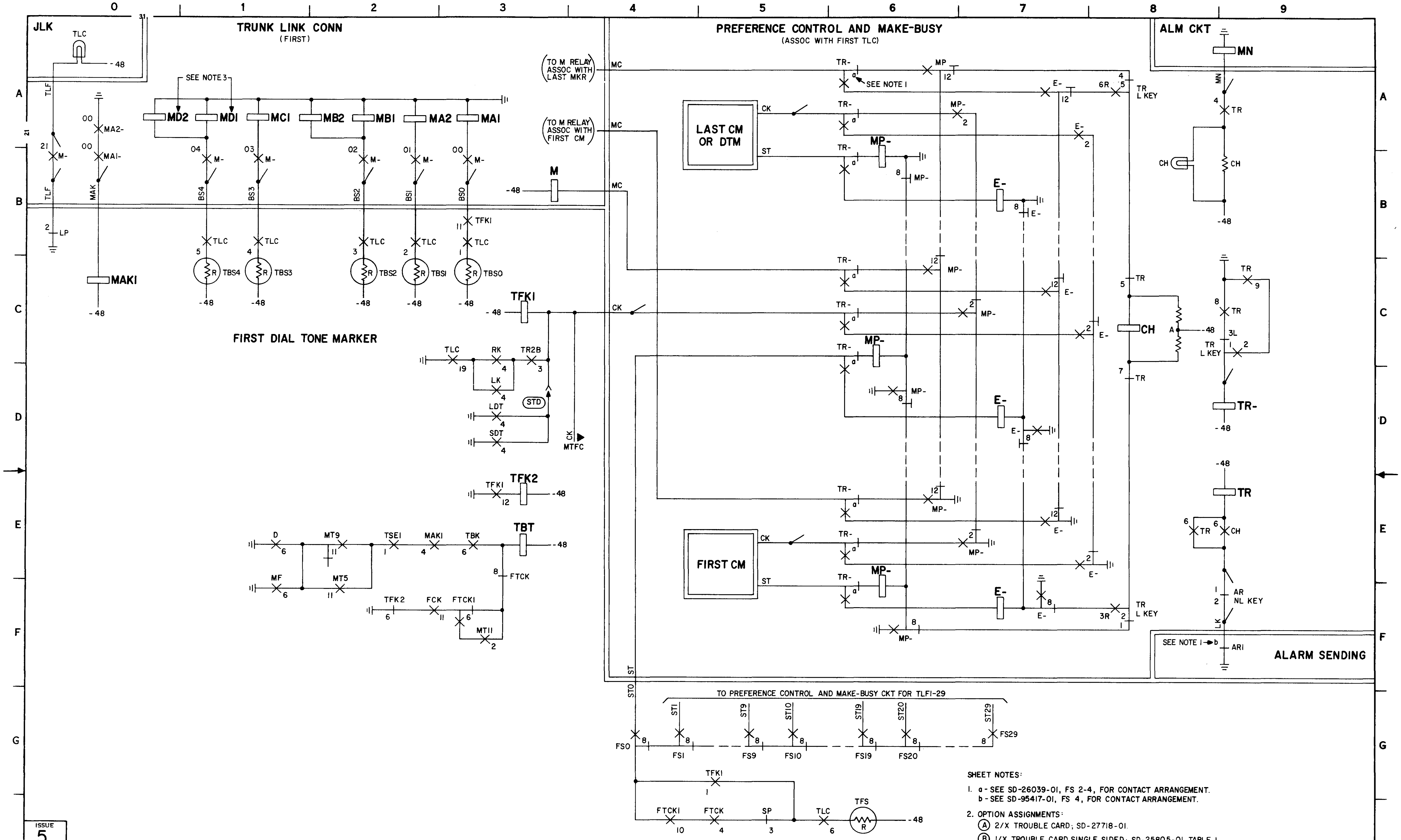
SFD-10-01-K305



SHEET NOTES:

1. a - SEE SD-26039-01, FS 2-4, FOR CONTACT ARRANGEMENT.
   b - SEE SD-95417-01, FS 4, FOR CONTACT ARRANGEMENT.
2. OPTION ASSIGNMENTS:
   Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
3. MD1 AND MD2 RELAYS MOUNTED ON THE ORLM.

ISSUE
5

SFD-10-01-K306

TRUNK LINK FRAME SEIZURE
(DT CLASS)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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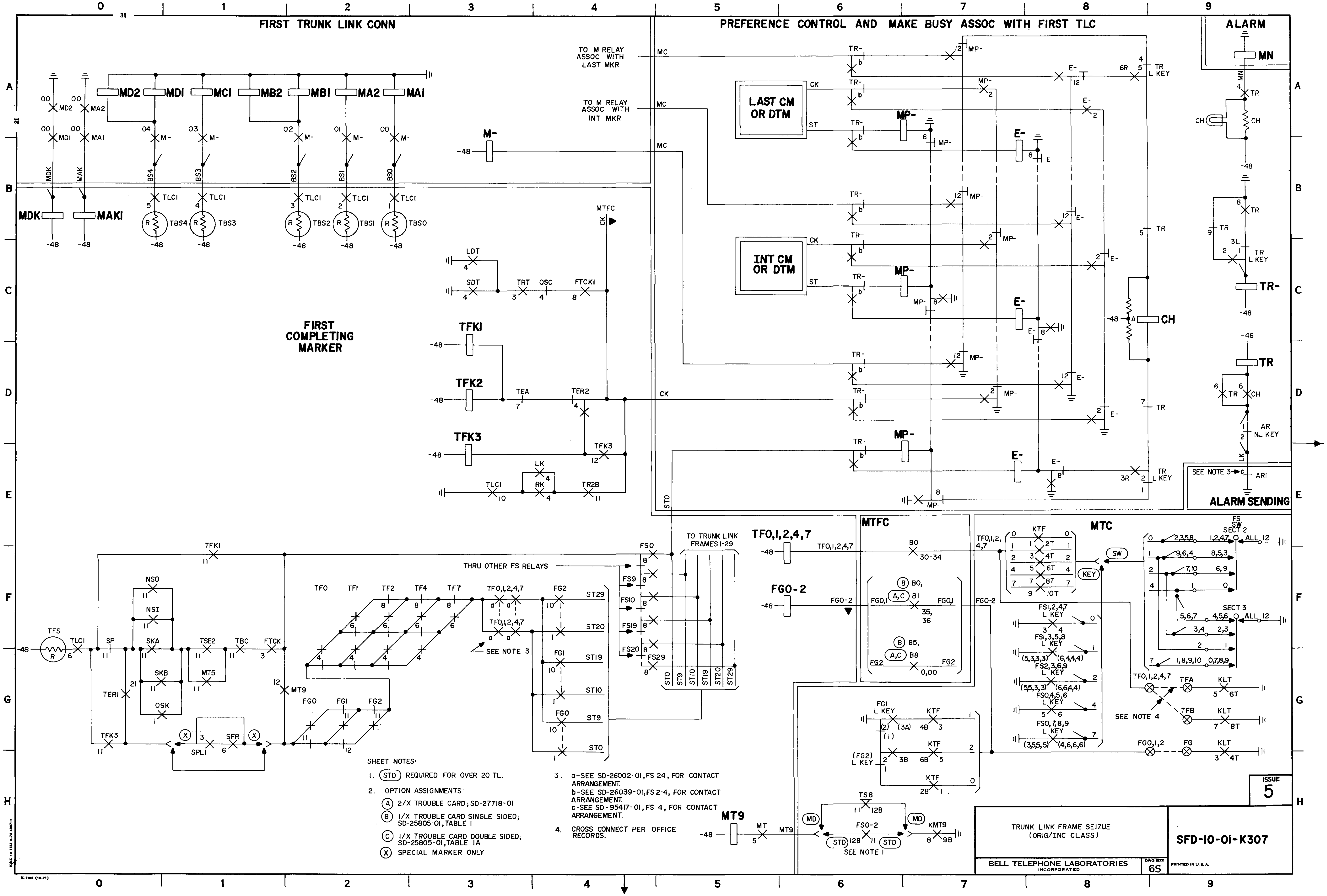
E-7481-L (4-73)



SHEET NOTES:

1. (STD) REQUIRED FOR OVER 20 TL.
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
   - ⓧ SPECIAL MARKER ONLY
3. a-SEE SD-26002-01, FS 24, FOR CONTACT ARRANGEMENT.
   b-SEE SD-26039-01, FS 2-4, FOR CONTACT ARRANGEMENT.
   c-SEE SD-95417-01, FS 4, FOR CONTACT ARRANGEMENT.
4. CROSS CONNECT PER OFFICE RECORDS.

ISSUE
5

TRUNK LINK FRAME SEIZUE
(ORIG/INC CLASS)

SFD-10-01-K307

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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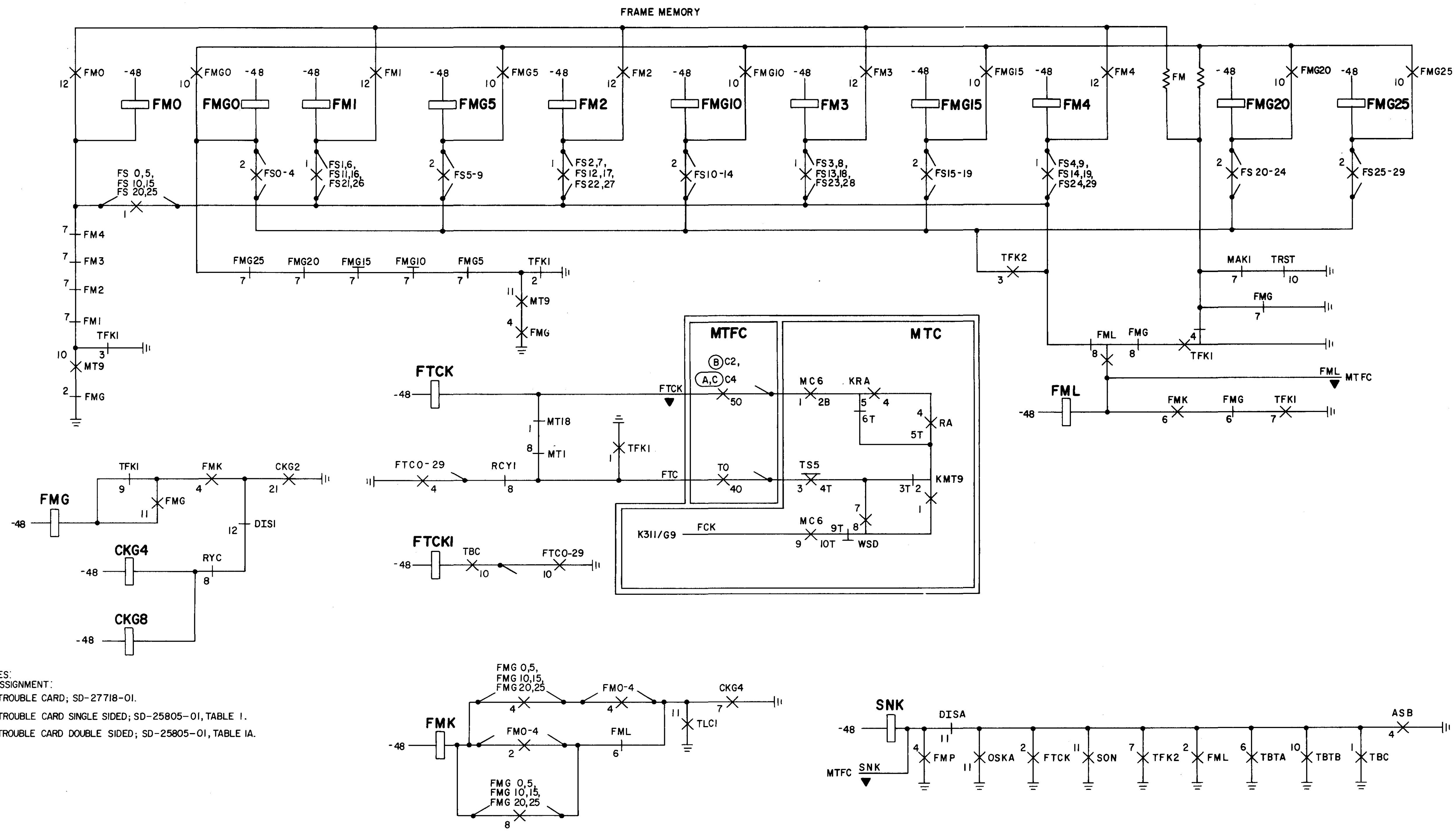
E-7461 (10-71)

SFD-10-01-K307

COMPLETING MARKER



SHEET NOTES:
1. OPTION ASSIGNMENT:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

TRUNK LINK FRAME MEMORY

SFD-10-01-K309

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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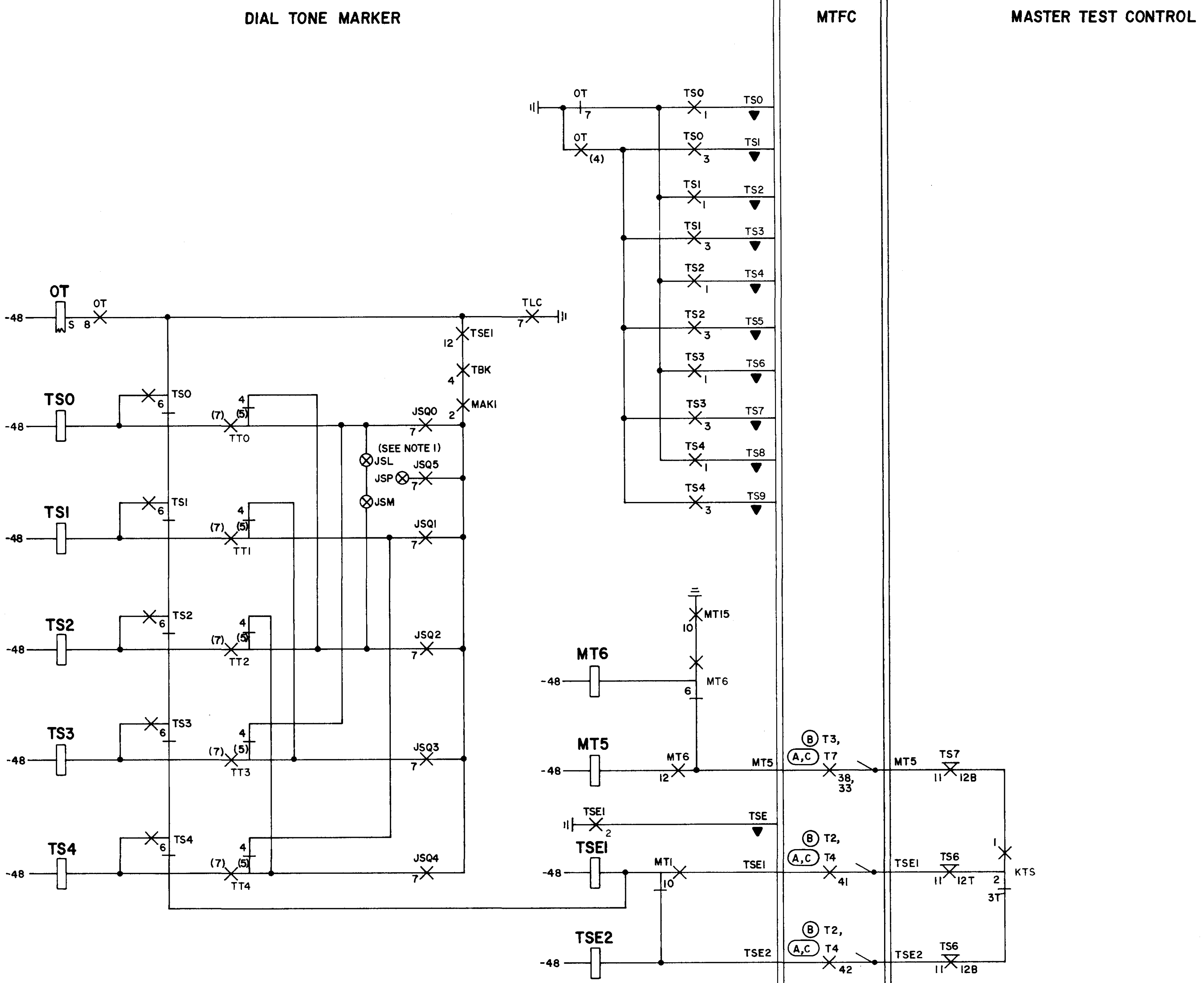

SHEET NOTES:

1.

ORIG REG PER TLF	CONNECT	TO
4 OR LESS	JSP	JSL
4 OR 5		JSL
5 OR MORE		JSM

2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K310

ORIGINATING REGISTER SELECTION

DWG SIZE 6S

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INCORPORATED

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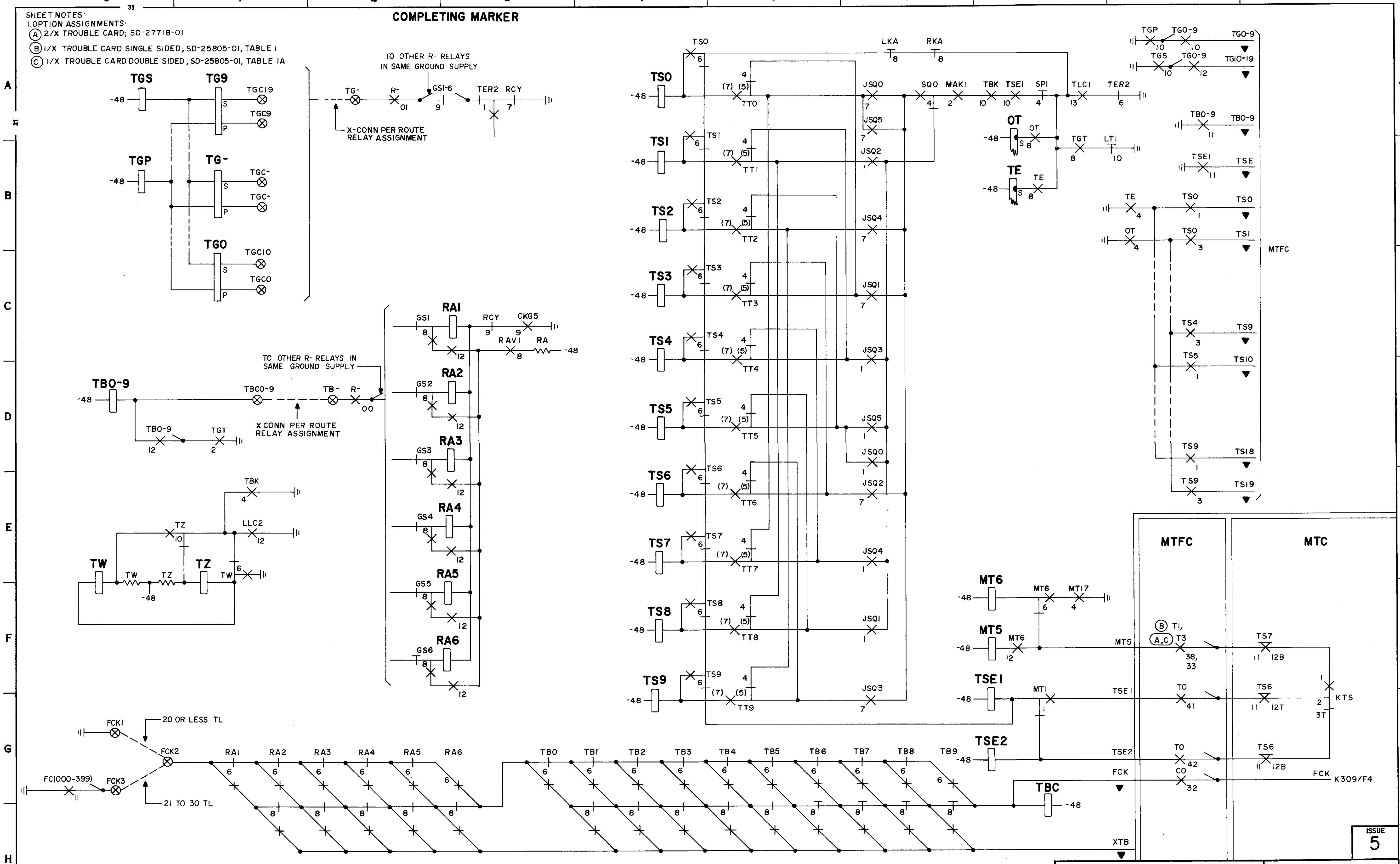
E-7481-L (4-73)



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

ISSUE 5

TRUNK SELECTION
(ORIG CLASS)

SFD-10-01-K311

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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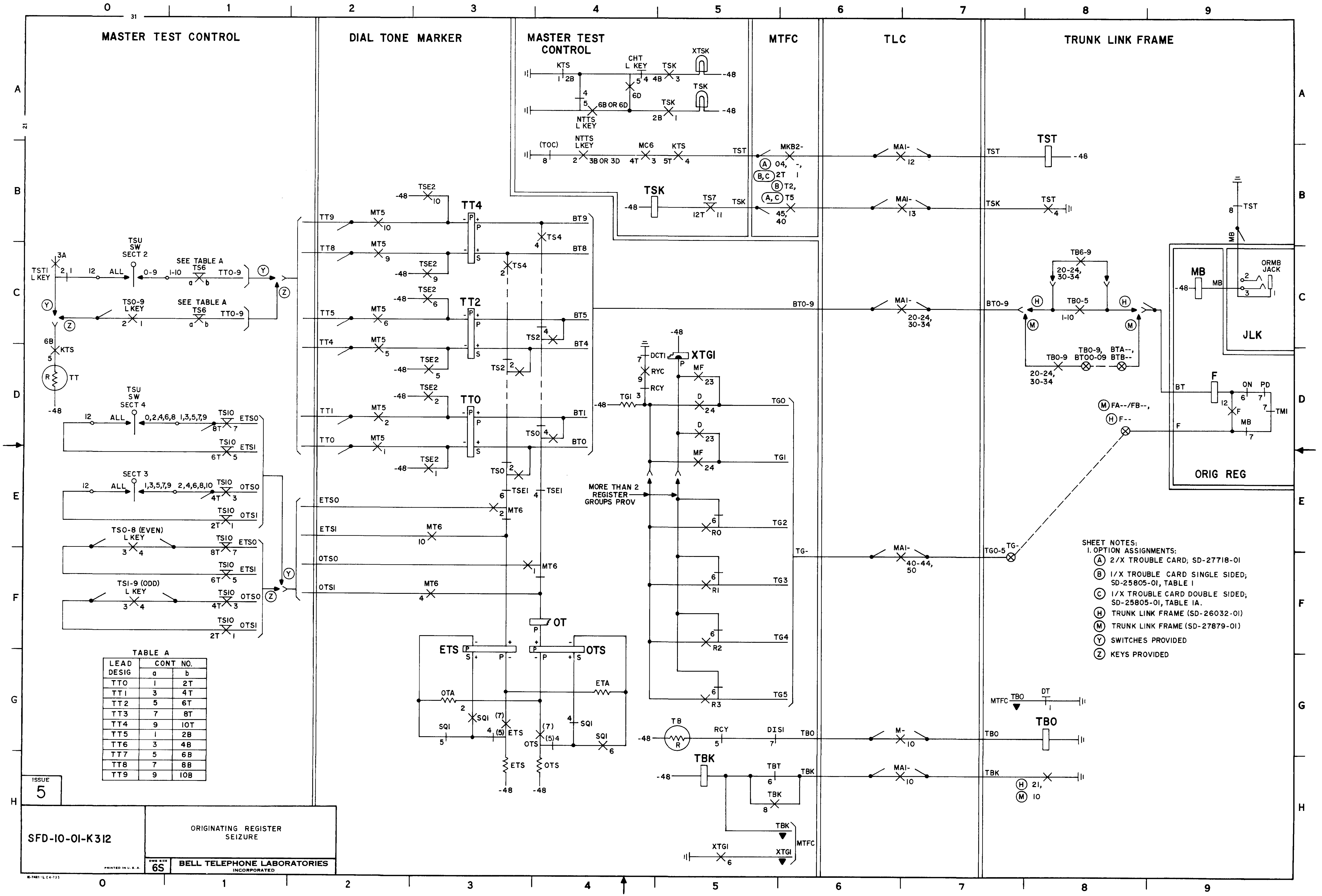
E-7461 (10-71)



SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
- Ⓗ TRUNK LINK FRAME (SD-26032-01)
- Ⓜ TRUNK LINK FRAME (SD-27879-01)
- Ⓨ SWITCHES PROVIDED
- Ⓩ KEYS PROVIDED

TABLE A

LEAD DESIG	CONT NO. a	CONT NO. b
TTO	1	2T
TT1	3	4T
TT2	5	6T
TT3	7	8T
TT4	9	10T
TT5	1	2B
TT6	3	4B
TT7	5	6B
TT8	7	8B
TT9	9	10B

ISSUE 5

SFD-10-01-K312

ORIGINATING REGISTER
SEIZURE

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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E-7481-L (4-73)

SFD-10-01-K312

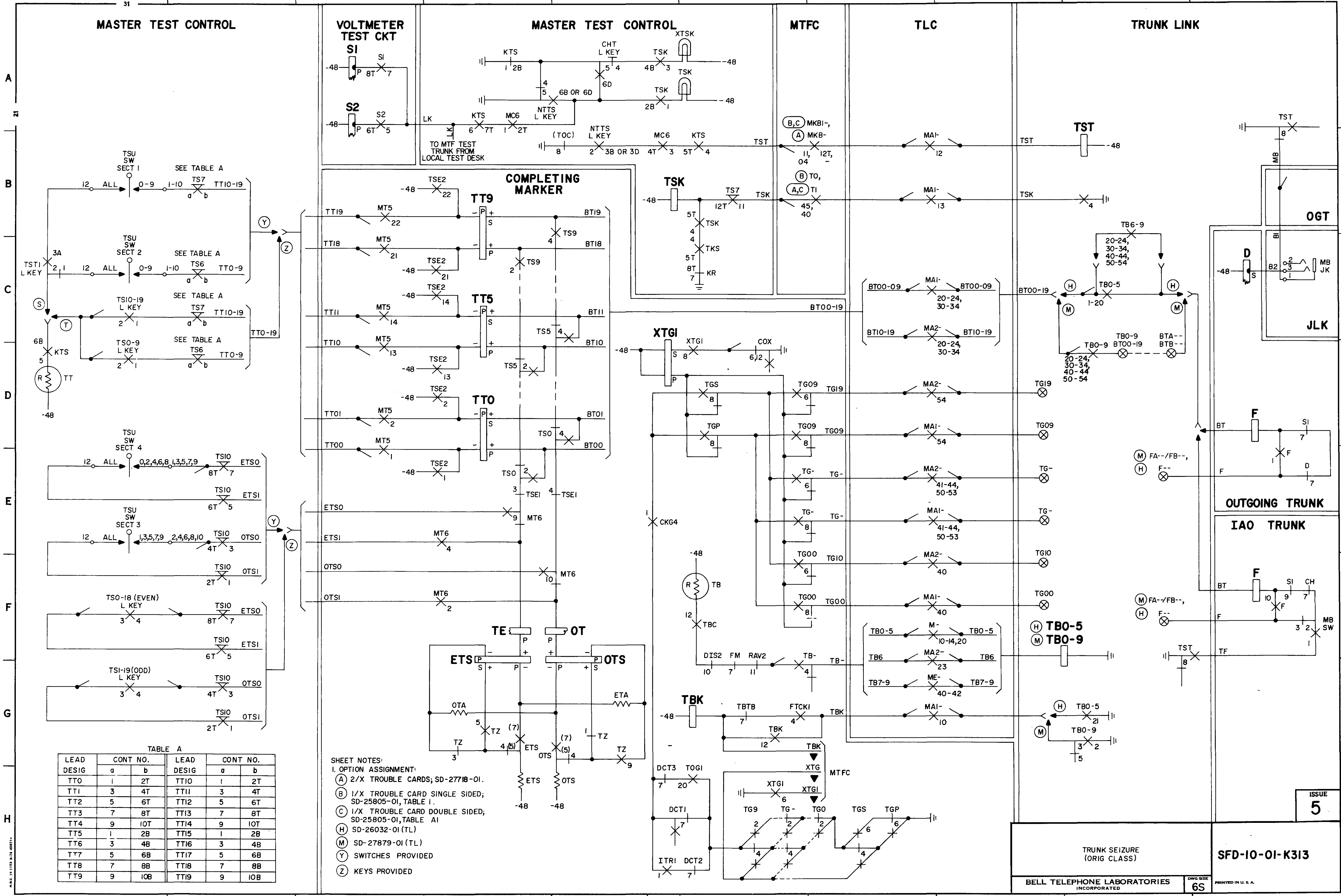


TABLE A

LEAD DESIG	CONT NO.		LEAD DESIG	CONT NO.	
	a	b		a	b
TT0	1	2T	TT10	1	2T
TT1	3	4T	TT11	3	4T
TT2	5	6T	TT12	5	6T
TT3	7	8T	TT13	7	8T
TT4	9	10T	TT14	9	10T
TT5	1	2B	TT15	1	2B
TT6	3	4B	TT16	3	4B
TT7	5	6B	TT17	5	6B
TT8	7	8B	TT18	7	8B
TT9	9	10B	TT19	9	10B

SHEET NOTES:

1. OPTION ASSIGNMENT:
   - Ⓐ 2/X TROUBLE CARDS; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE A1
   - Ⓗ SD-26032-01 (TL)
   - Ⓜ SD-27879-01 (TL)
   - Ⓨ SWITCHES PROVIDED
   - Ⓩ KEYS PROVIDED

ISSUE
5

TRUNK SEIZURE
(ORIG CLASS)

SFD-10-01-K313

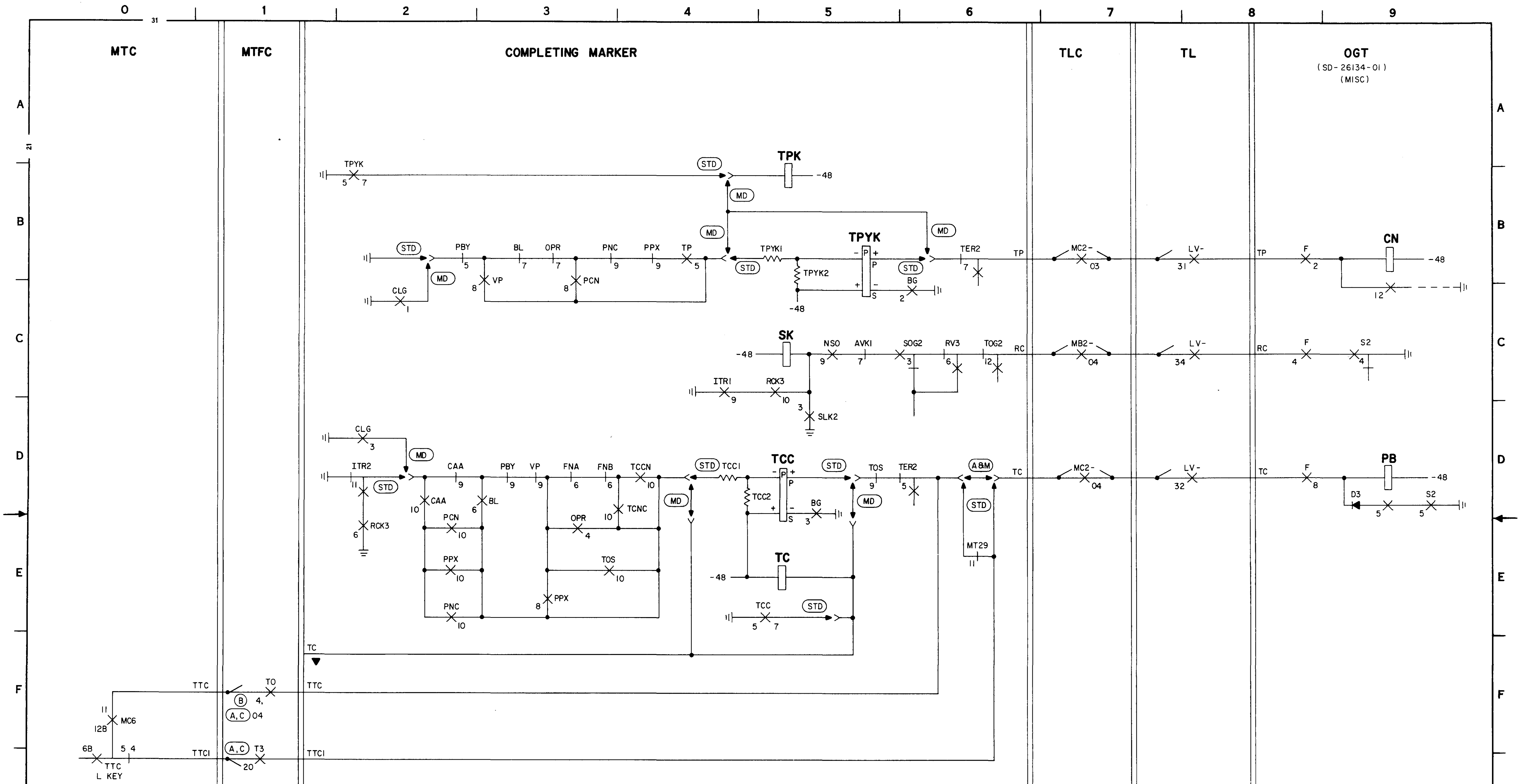
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

E-7421 (10-71)

SFD-10-01-K313



SHEET NOTES:

1. OPTION ASSIGNMENT:

Ⓐ 2/X TROUBLE CARD; SD-27718-01.

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K314

TRUNK CHARGING
(ORIG CLASS)

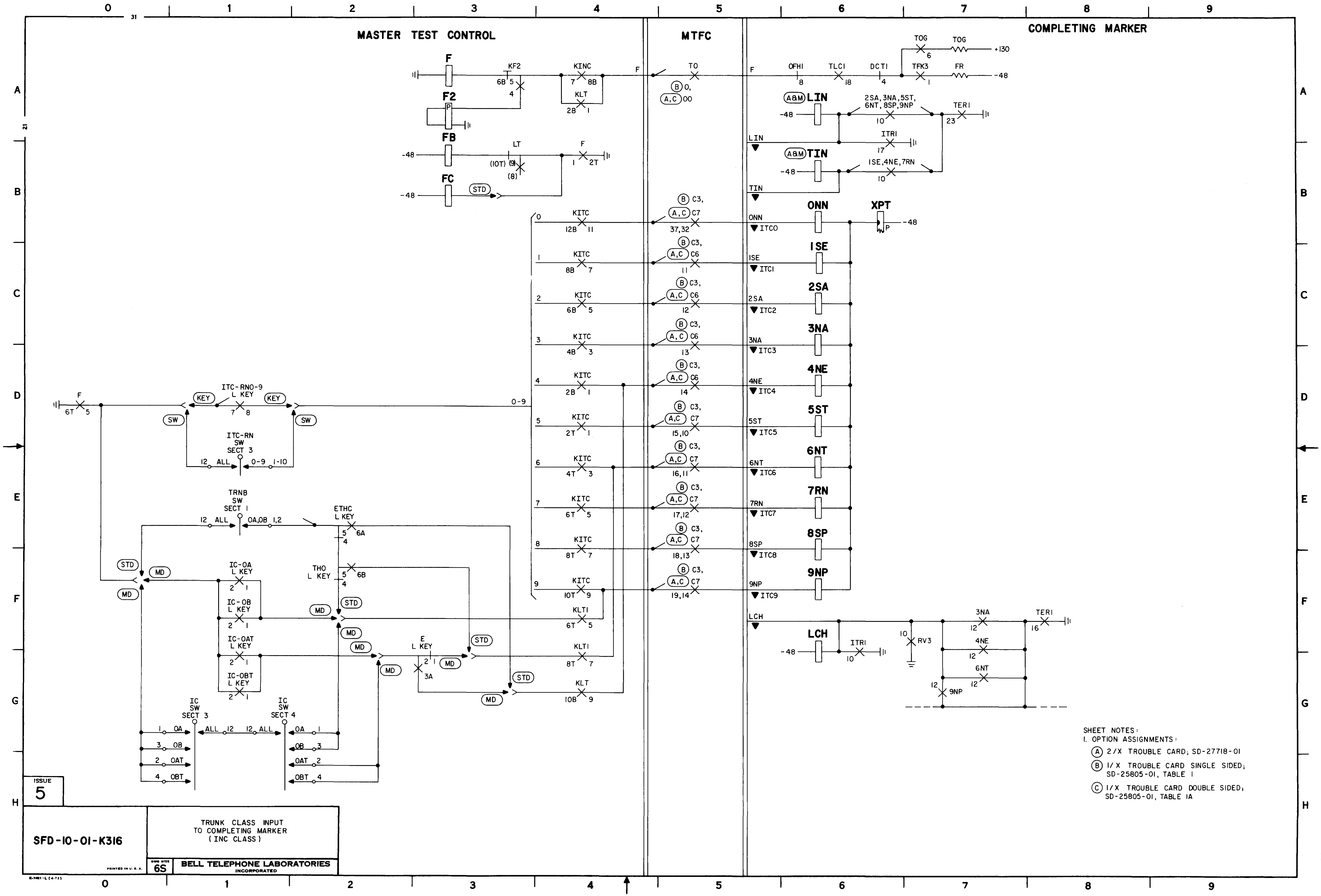
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-73)

SFD-10-01-K314



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-K316

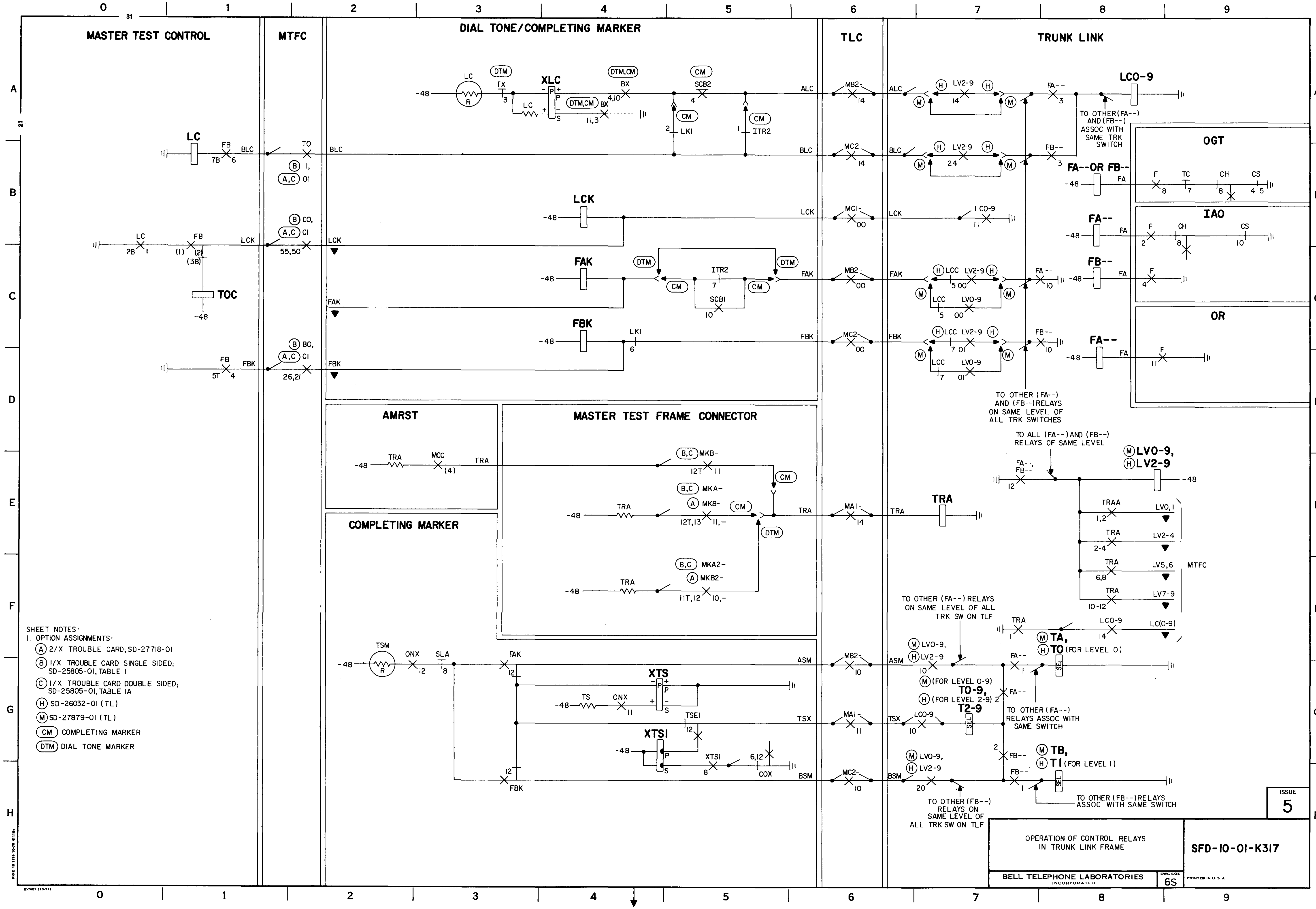
TRUNK CLASS INPUT
TO COMPLETING MARKER
(INC CLASS)

DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-73)

SFD-10-01-K316


MASTER TEST CONTROL
MTFC
DIAL TONE/COMPLETING MARKER
TLC
TRUNK LINK
XLC
LC
DTM
DTM,CM
CM
TX
BX
SCB2
ALC
MB2-
LV2-9
FA--
LCO-9
LKI
ITR2
TO OTHER (FA--) AND (FB--) ASSOC WITH SAME TRK SWITCH
BLC
FB
TO
MC2-
FB--
OGT
FA--OR FB--
F
TC
CH
CS
LCK
MCI-
IAO
FAK
SCBI
FB--
FBK
OR
TOC
TO OTHER (FA--) AND (FB--) RELAYS ON SAME LEVEL OF ALL TRK SWITCHES
AMRST
MASTER TEST FRAME CONNECTOR
TRA
MCC
MKB-
MKA-
MKA2-
MKB2-
TO ALL (FA--) AND (FB--) RELAYS OF SAME LEVEL
LVO-9,
LV2-9
MAI-
TRAA
LVO,1
LV2-4
LV5,6
LV7-9
LC(O-9)
COMPLETING MARKER
TO OTHER (FA--) RELAYS ON SAME LEVEL OF ALL TRK SW ON TLF
TSM
ONX
SLA
XTS
TS
ASM
TSX
TSEI
XTSI
COX
BSM
TA,
TO (FOR LEVEL 0)
TO-9,
T2-9
(FOR LEVEL 0-9)
(FOR LEVEL 2-9)
TO OTHER (FA--) RELAYS ASSOC WITH SAME SWITCH
TB,
TI (FOR LEVEL I)
TO OTHER (FB--) RELAYS ON SAME LEVEL OF ALL TRK SW ON TLF
TO OTHER (FB--) RELAYS ASSOC WITH SAME SWITCH
SEL
-48

SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
Ⓗ SD-26032-01 (TL)
Ⓜ SD-27879-01 (TL)
(CM) COMPLETING MARKER
(DTM) DIAL TONE MARKER

ISSUE
5

OPERATION OF CONTROL RELAYS
IN TRUNK LINK FRAME

SFD-10-01-K317

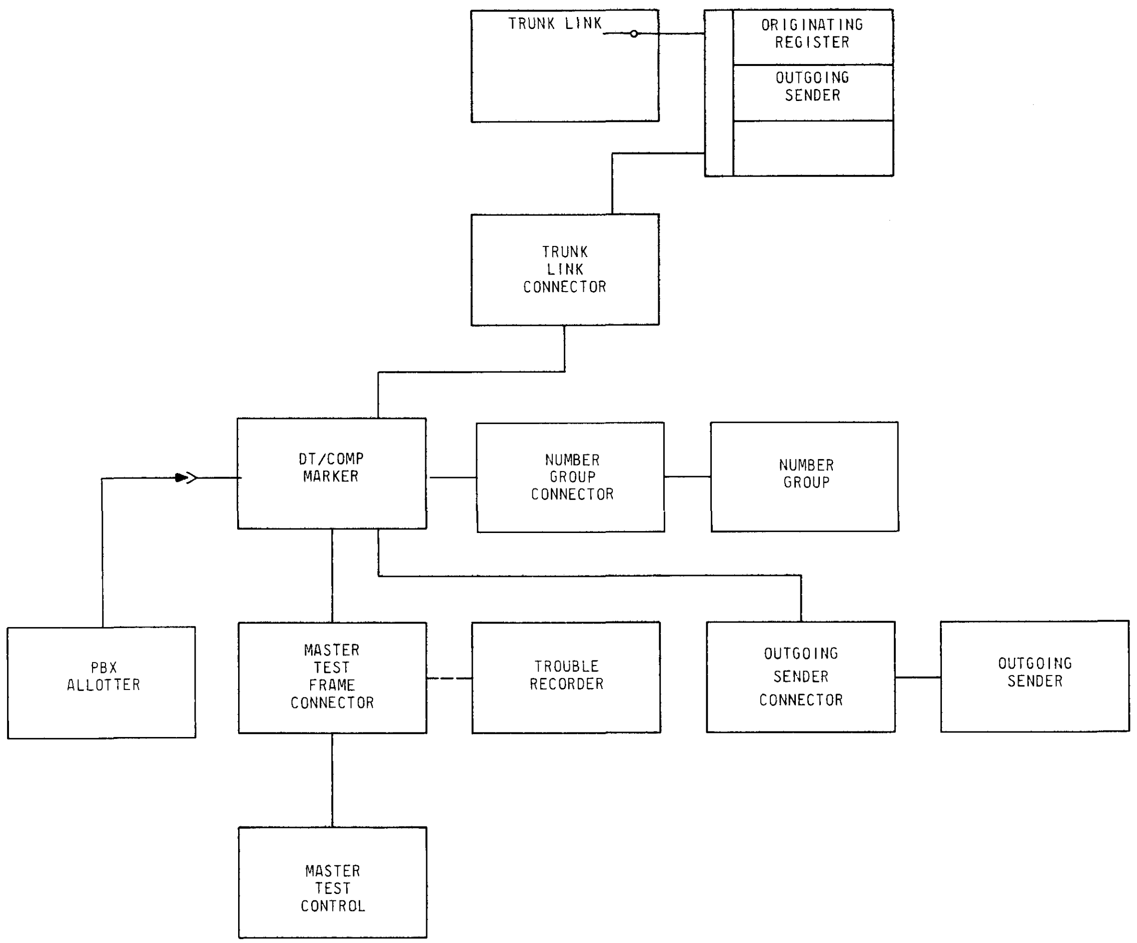
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

E-7431 (10-71)

SFD-10-01-K317



INDEX

PAGE NO.	TITLE
K401	PART K4 - NUMBER GROUP CONNECTION AND TRANSLATION
K402	SEQUENCE CHART - NUMBER GROUP CONNECTION AND TRANSLATION
K403	TRANSLATION FOR NUMBER GROUP SELECTION
K404	RESERVED
K405	NUMBER SERIES START SELECTION
K406	NUMBER GROUP START AND OFF-NORMAL CONTROL
K407	NUMBER GROUP SEIZURE
K408	NUMBER GROUP RELEASE
K409	RINGING COMBINATION SELECTION
K410	RESERVED
K411	PBX SLEEVE CONTROL
K412	NO TEST CONTROL
K413	BLANK NUMBER, INTERCEPT, AND PBX RECYCLE
K414	MISCELLANEOUS INPUTS TO NUMBER GROUP

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART K4
NUMBER GROUP CONNECTION
AND TRANSLATION

SFD-10-01-K401

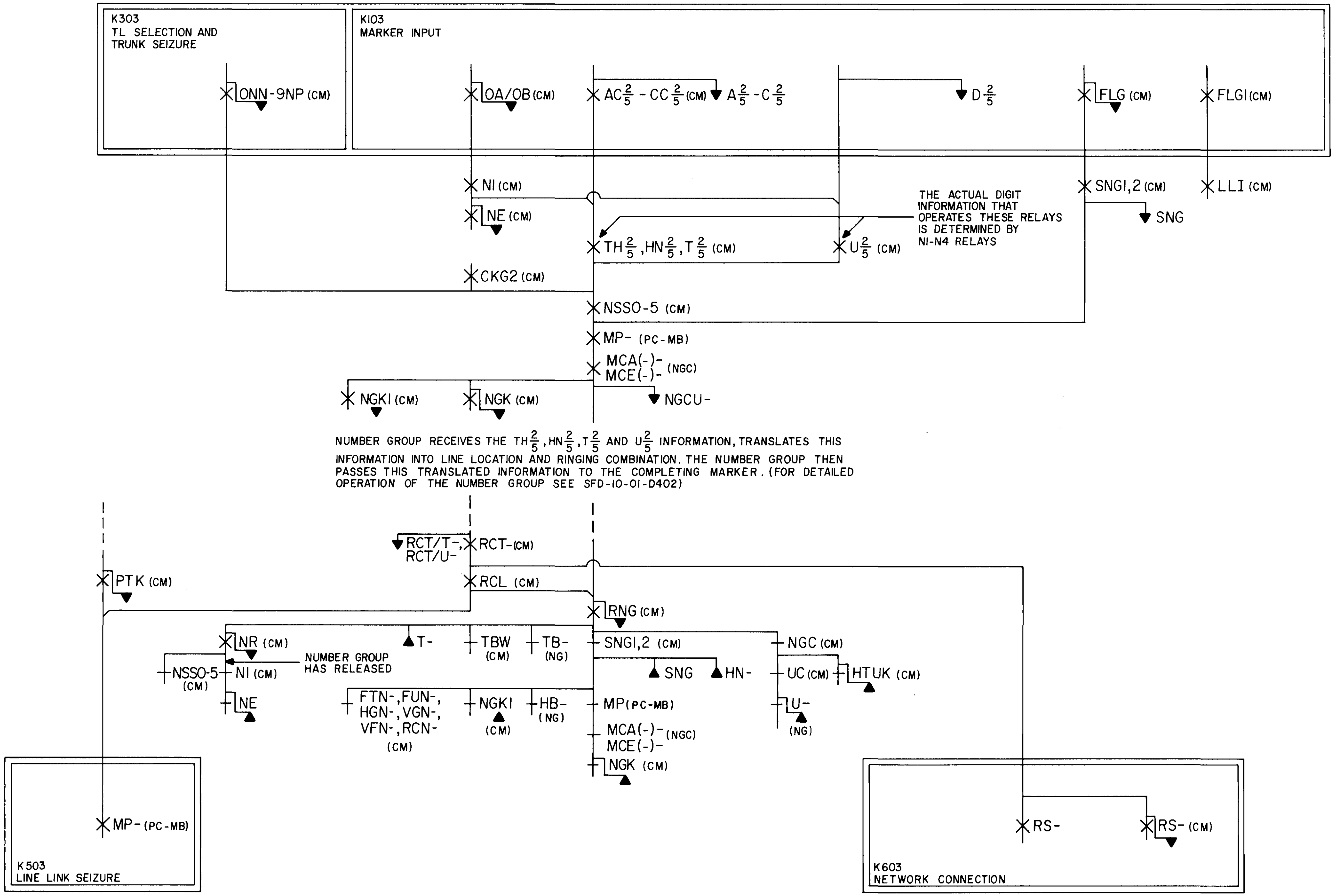
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U. S. A.

SFD-10-01-K401
2 SHEETS, SHEET 1

E-7431 (10-71)



THE ACTUAL DIGIT INFORMATION THAT OPERATES THESE RELAYS IS DETERMINED BY NI-N4 RELAYS

NUMBER GROUP RECEIVES THE TH$\frac{2}{5}$, HN$\frac{2}{5}$, T$\frac{2}{5}$ AND U$\frac{2}{5}$ INFORMATION, TRANSLATES THIS INFORMATION INTO LINE LOCATION AND RINGING COMBINATION. THE NUMBER GROUP THEN PASSES THIS TRANSLATED INFORMATION TO THE COMPLETING MARKER. (FOR DETAILED OPERATION OF THE NUMBER GROUP SEE SFD-10-01-D402)

ISSUE
5

SFD-10-01-K402

SEQUENCE CHART
NUMBER GROUP CONNECTION
AND TRANSLATION

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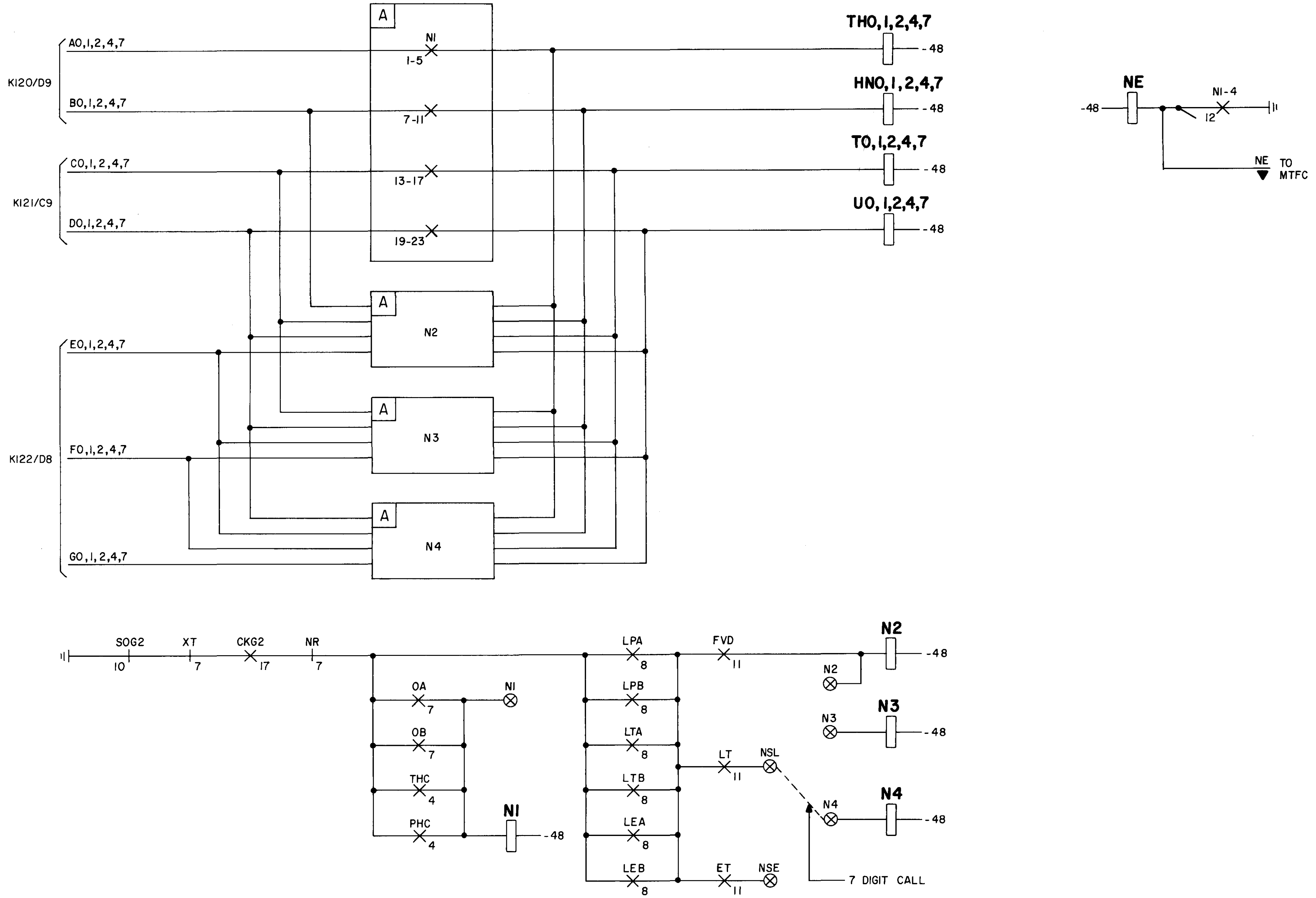
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-K402

COMPLETING MARKER



ISSUE
5

TRANSLATION FOR
NUMBER GROUP SELECTION

SFD-10-01-K403

BELL TELEPHONE LABORATORIES
INCORPORATED

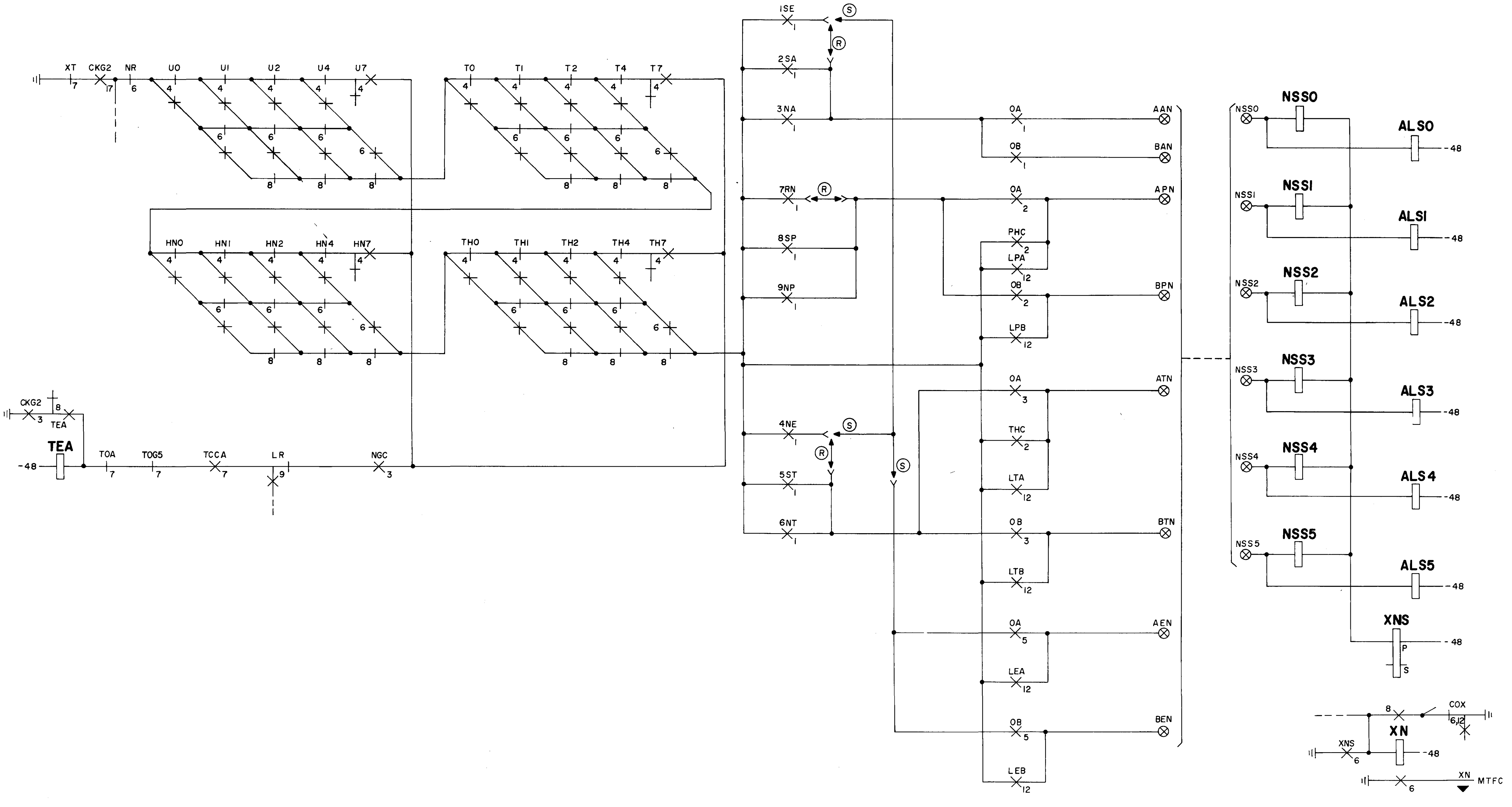
DWG SIZE
6S

PRINTED IN U.S.A.

E-7421 (10-71)

SFD-10-01-K403

COMPLETING MARKER



SHEET NOTES:

1. OPTION ASSIGNMENT:

TABLE OF OPTIONS		
TL INDICATES TRK AS TOLL (T), FULL SELECT (F), OR MANUAL (M)	YES (A&M)	R
	NO (STD)	S

NUMBER SERIES START SELECTION

SFD-10-01-K405

ISSUE 5

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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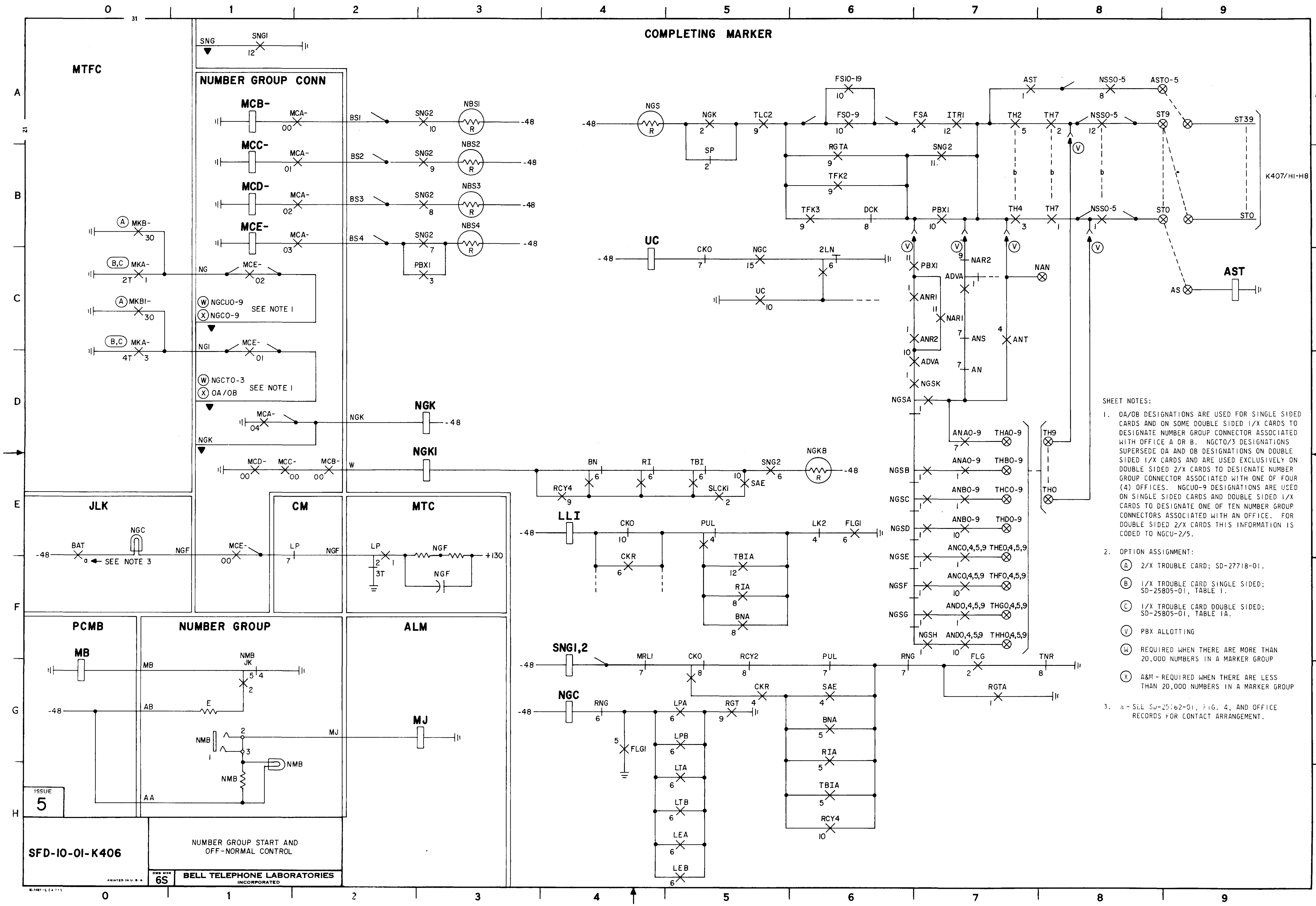
COMPLETING MARKER



SHEET NOTES:

1. OA/OB DESIGNATIONS ARE USED FOR SINGLE SIDED CARDS AND ON SOME DOUBLE SIDED I/X CARDS TO DESIGNATE NUMBER GROUP CONNECTOR ASSOCIATED WITH OFFICE A OR B. NGCTO/3 DESIGNATIONS SUPERSEDE OA AND OB DESIGNATIONS ON DOUBLE SIDED I/X CARDS AND ARE USED EXCLUSIVELY ON DOUBLE SIDED 2/X CARDS TO DESIGNATE NUMBER GROUP CONNECTOR ASSOCIATED WITH ONE OF FOUR (4) OFFICES. NGCUO-9 DESIGNATIONS ARE USED ON SINGLE SIDED CARDS AND DOUBLE SIDED I/X CARDS TO DESIGNATE ONE OF TEN NUMBER GROUP CONNECTORS ASSOCIATED WITH AN OFFICE. FOR DOUBLE SIDED 2/X CARDS THIS INFORMATION IS CODED TO NGCU-2/5.

2. OPTION ASSIGNMENT:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ I/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ I/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
   - Ⓥ PBX ALLOTTING
   - Ⓦ REQUIRED WHEN THERE ARE MORE THAN 20,000 NUMBERS IN A MARKER GROUP
   - Ⓧ A&M - REQUIRED WHEN THERE ARE LESS THAN 20,000 NUMBERS IN A MARKER GROUP

3. a - SEE SD-25762-01, FIG. 4, AND OFFICE RECORDS FOR CONTACT ARRANGEMENT.

ISSUE
5

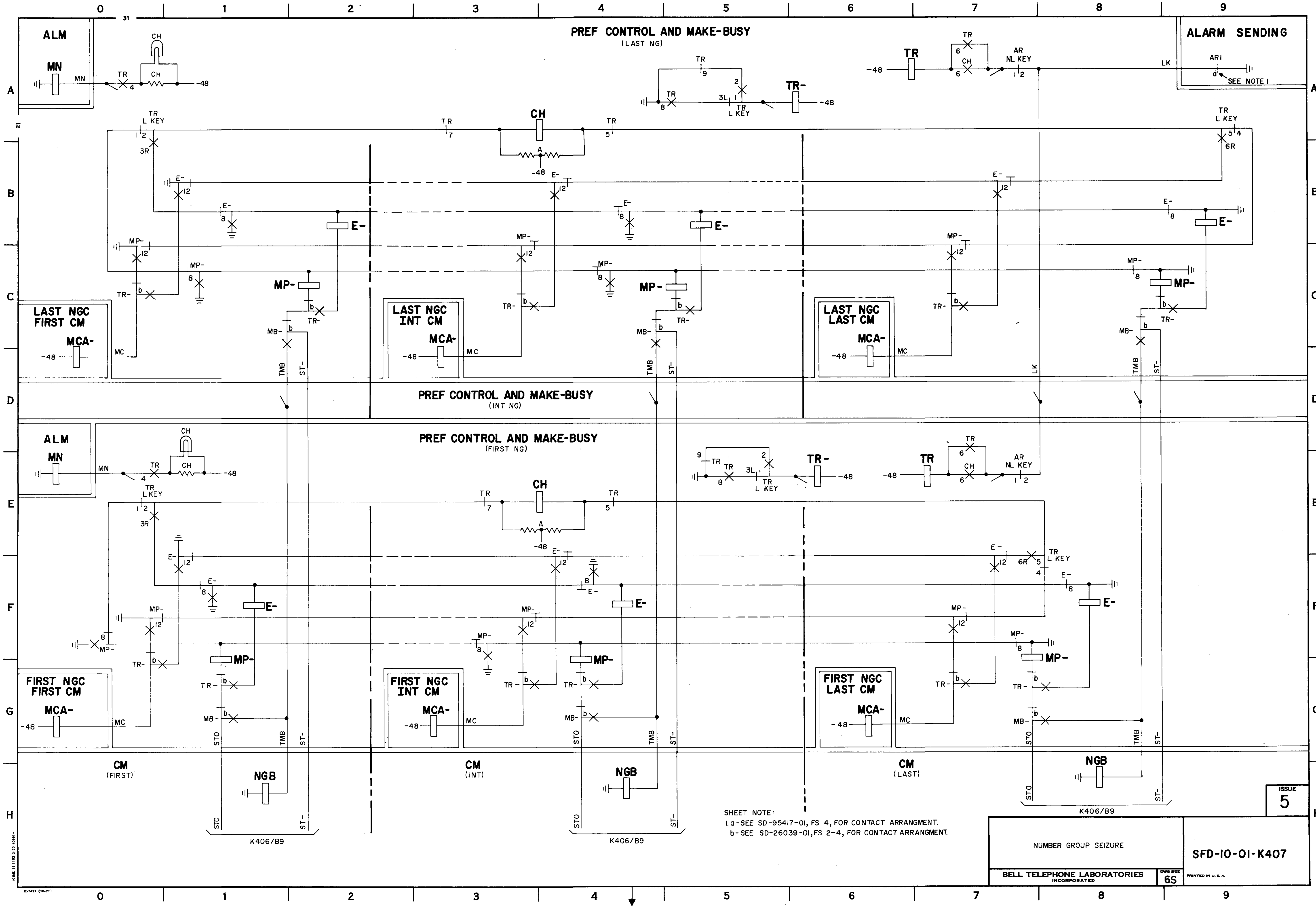
SFD-10-01-K406

NUMBER GROUP START AND
OFF-NORMAL CONTROL

6S
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-K406



SHEET NOTE:
1. a-SEE SD-95417-01, FS 4, FOR CONTACT ARRANGMENT.
b-SEE SD-26039-01, FS 2-4, FOR CONTACT ARRANGMENT.

ISSUE
5

NUMBER GROUP SEIZURE

SFD-10-01-K407

BELL TELEPHONE LABORATORIES
INCORPORATED

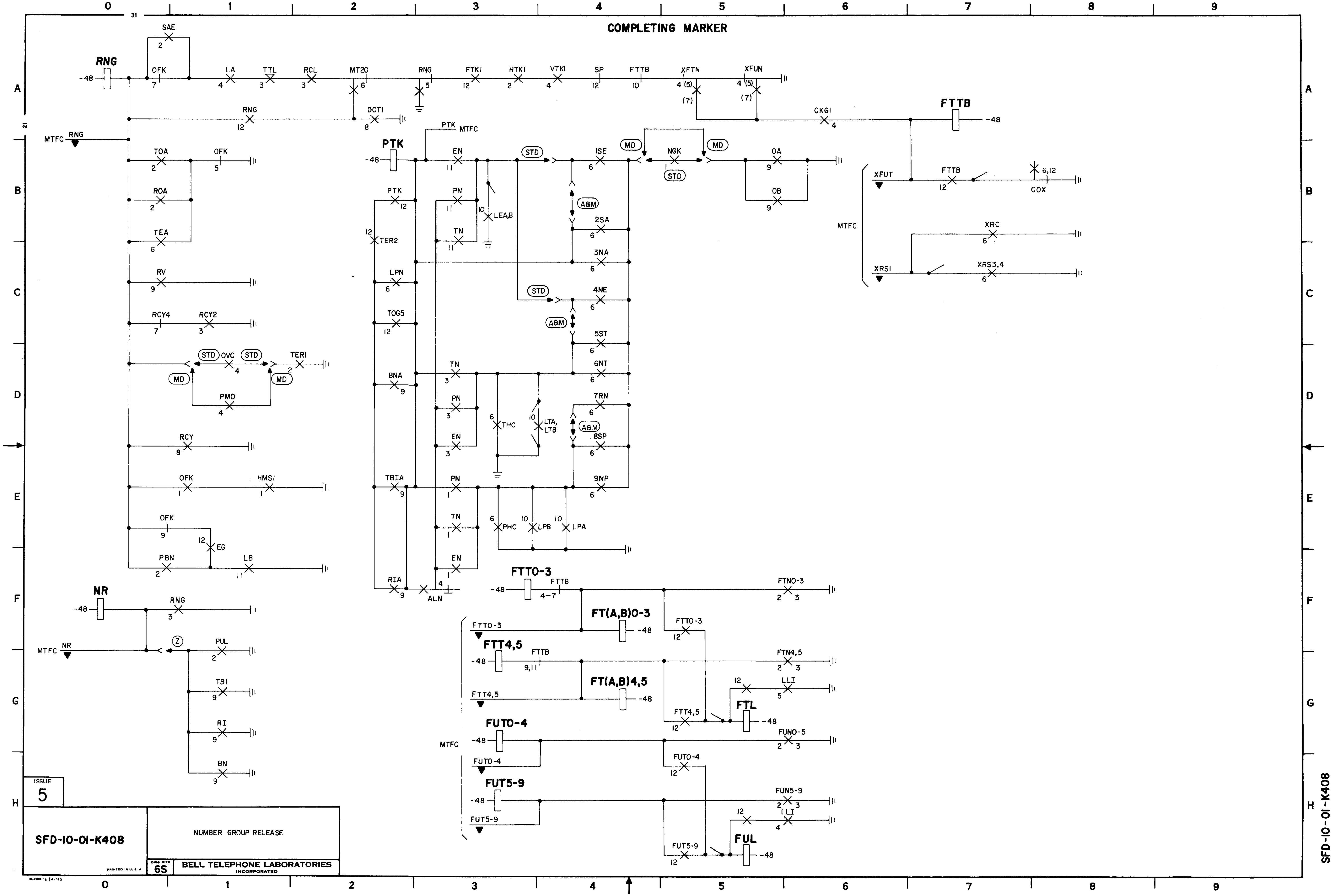
DWG SIZE
6S

PRINTED IN U.S.A.

E-7421 (10-71)

SFD-10-01-K407

COMPLETING MARKER



ISSUE
5

SFD-10-01-K408

NUMBER GROUP RELEASE

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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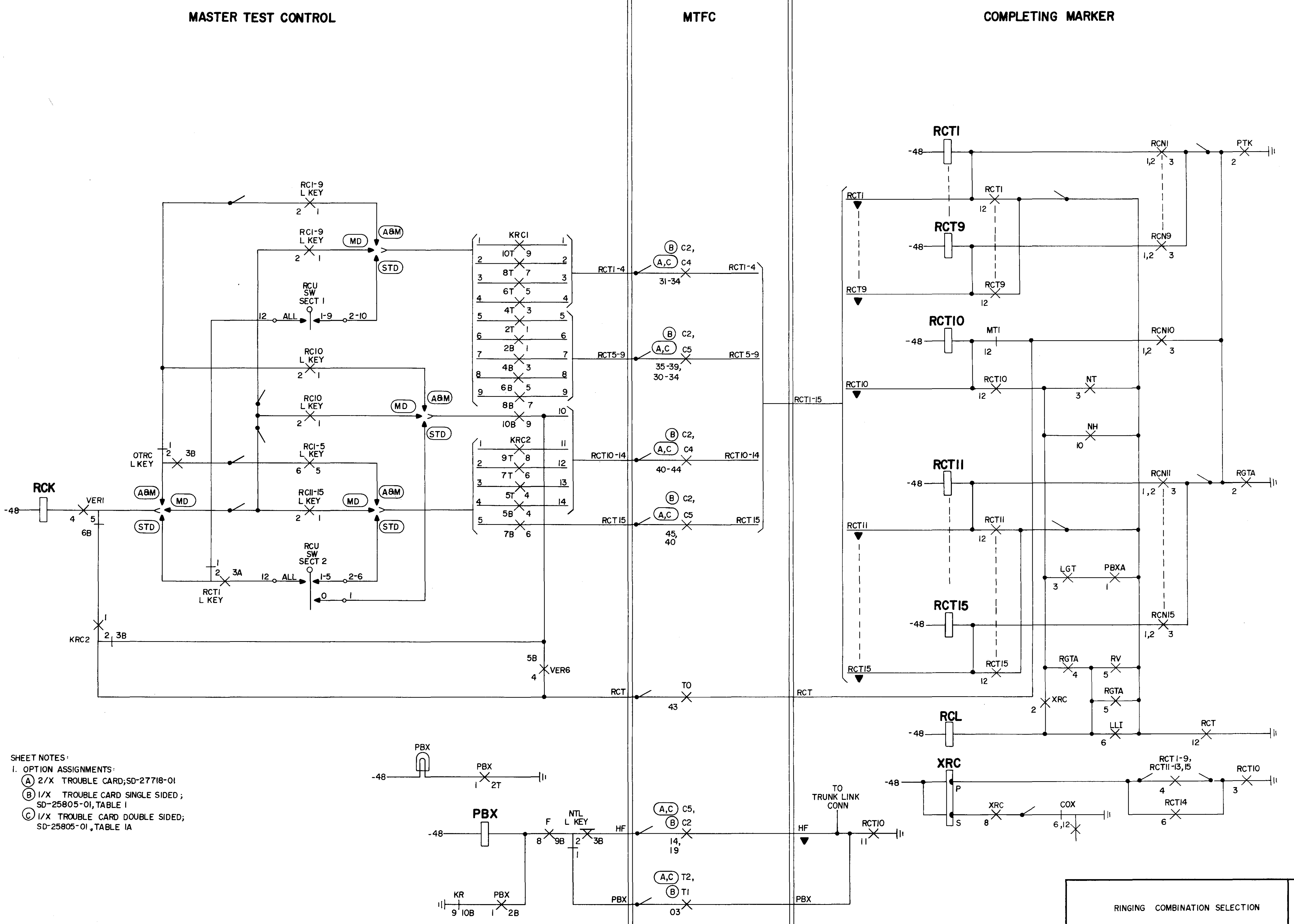
E-7481-L (4-72)

SFD-10-01-K408



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE 5

RINGING COMBINATION SELECTION

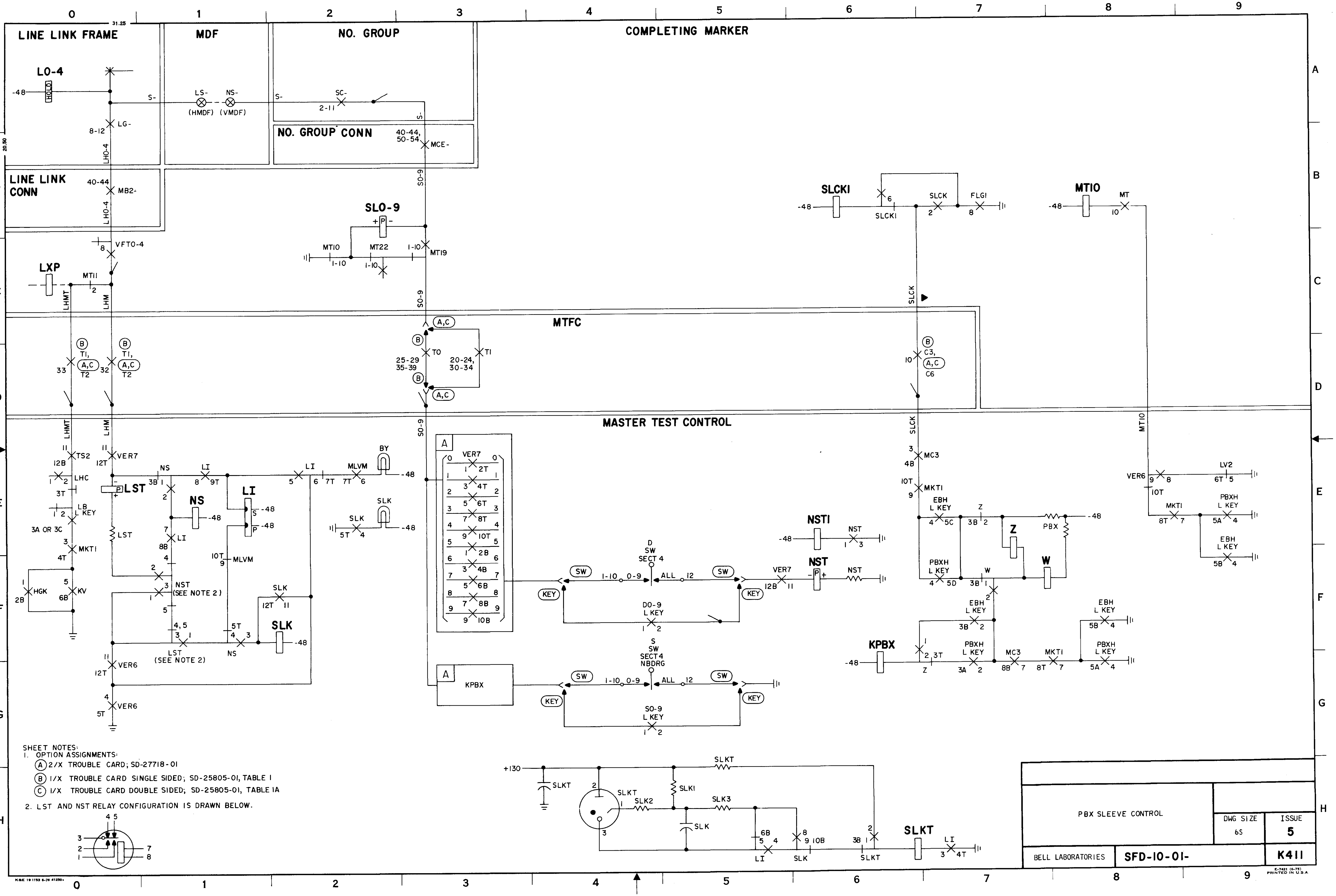
SFD-10-01-K409

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-K409



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

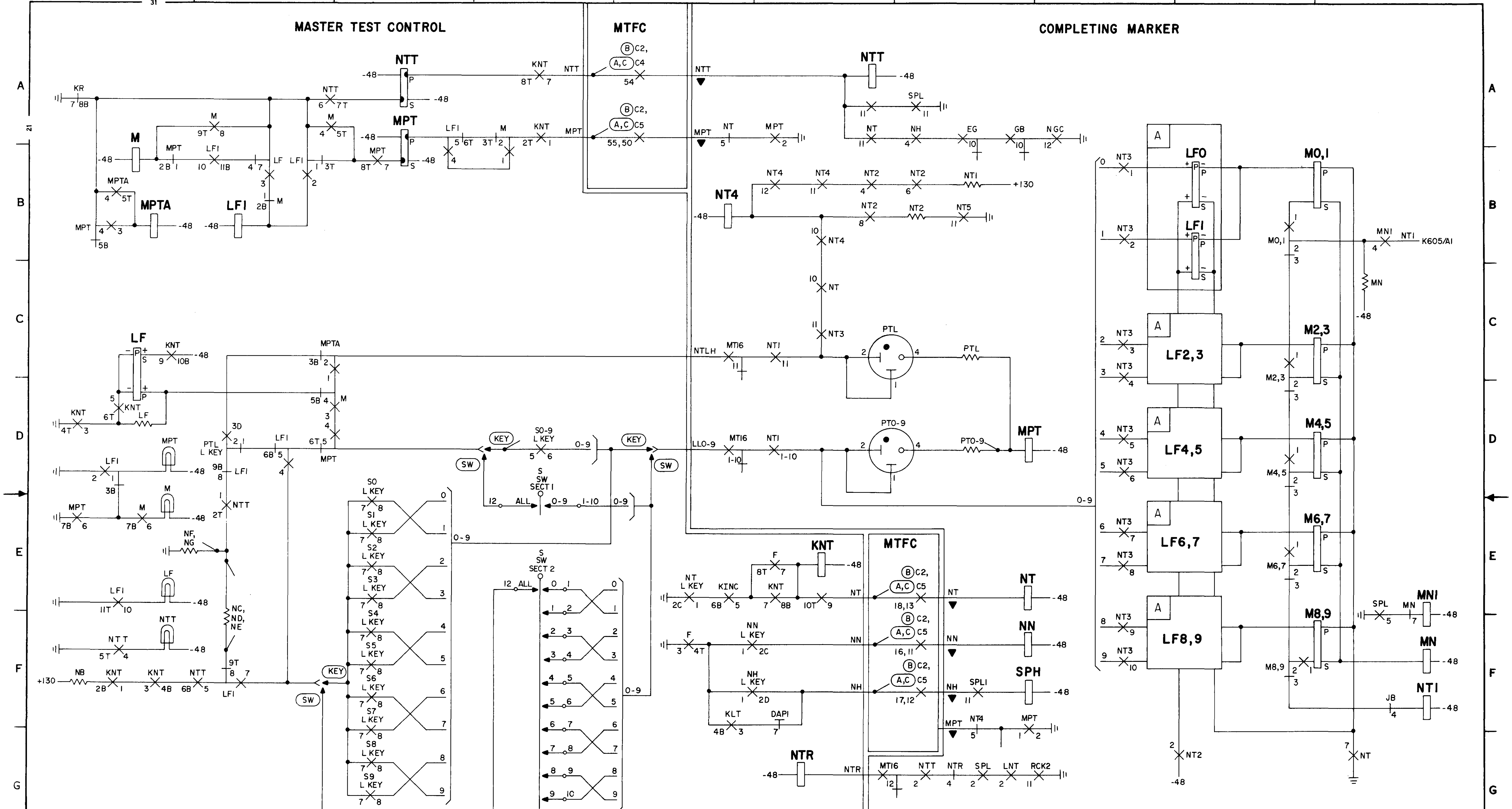
2. LST AND NST RELAY CONFIGURATION IS DRAWN BELOW.

PBX SLEEVE CONTROL

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K411

SFD-10-01-K411



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

ISSUE
5

SFD-10-01-K412

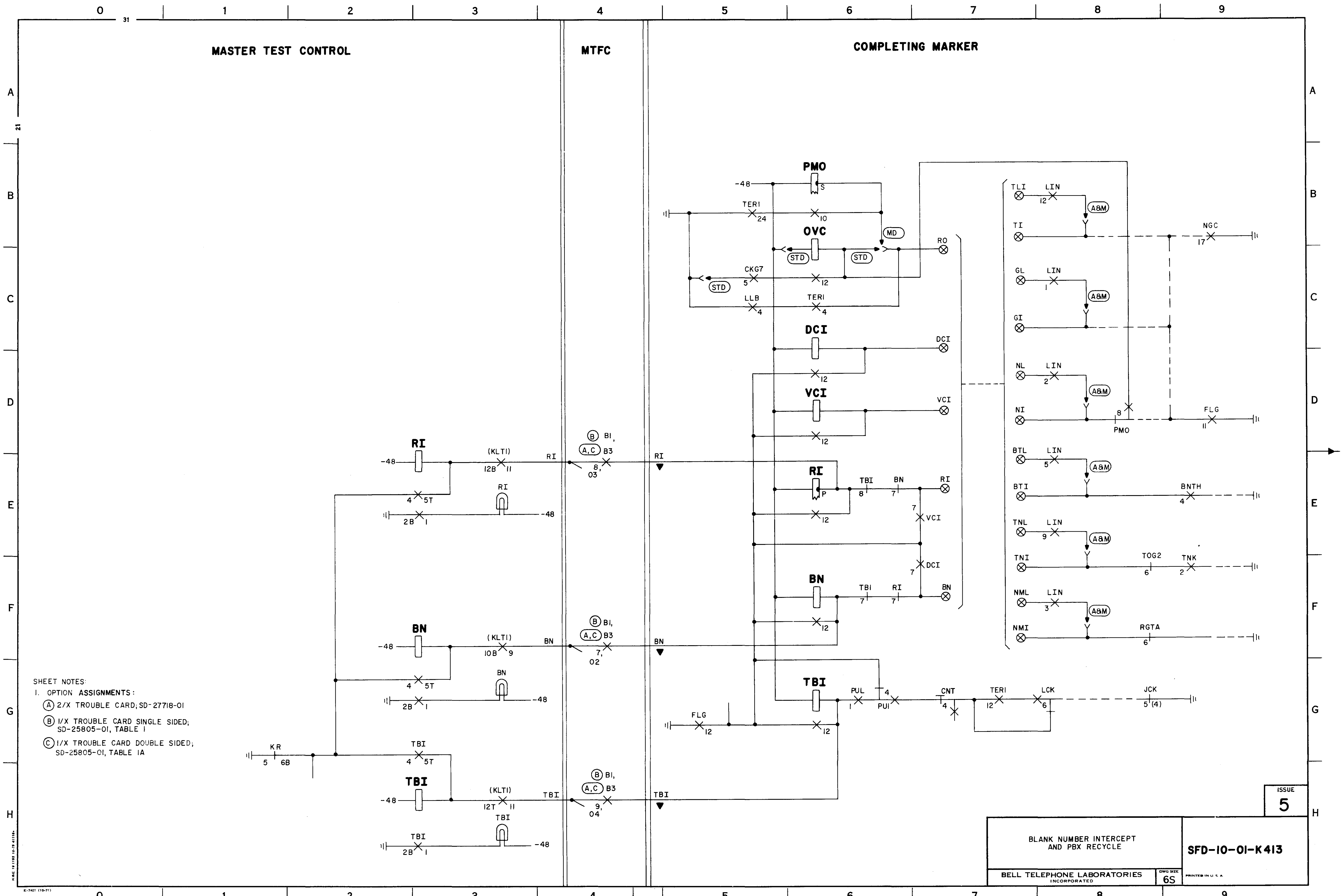
NO TEST CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-K412



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE 5

BLANK NUMBER INTERCEPT
AND PBX RECYCLE

SFD-10-01-K413

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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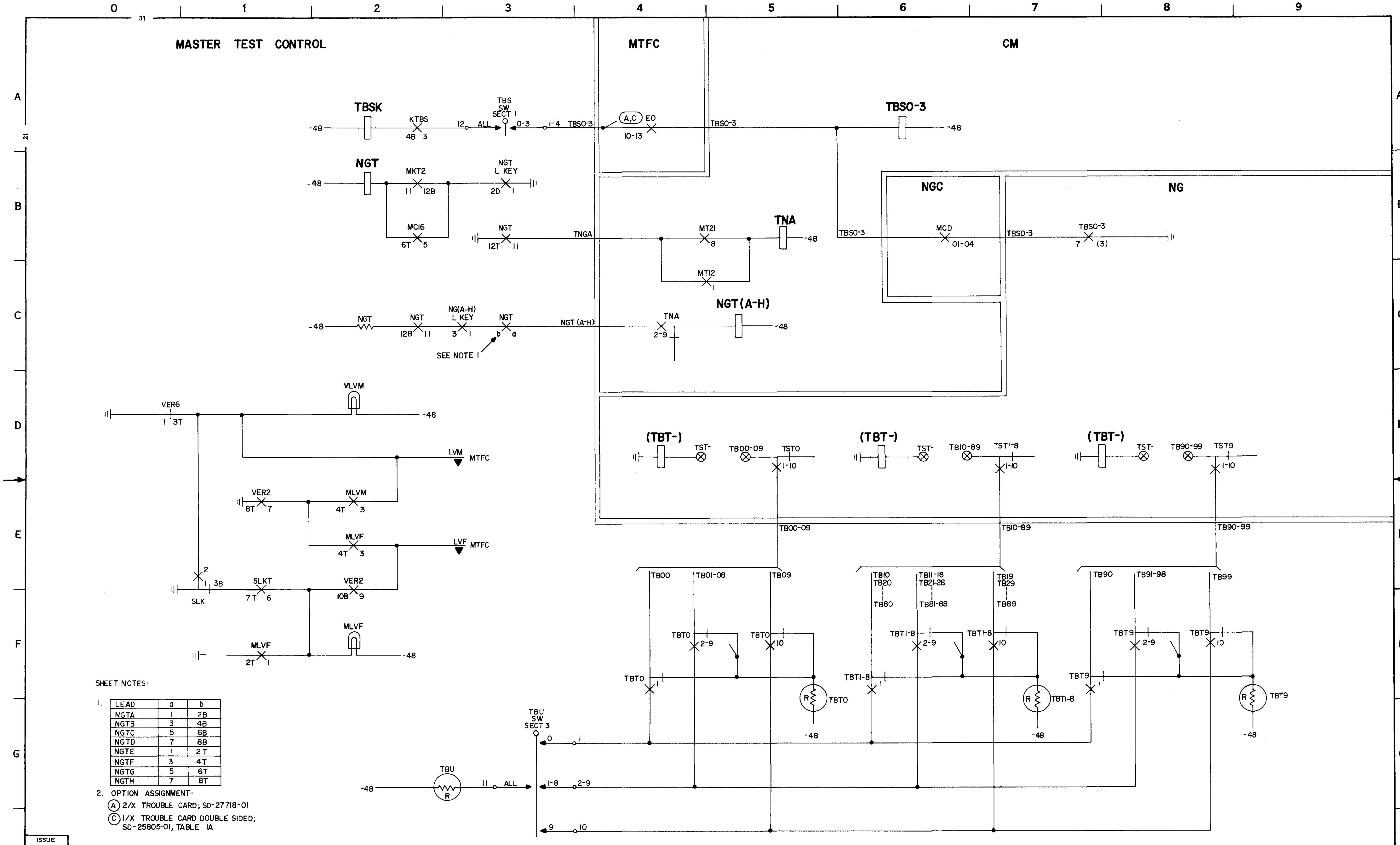
SFD-10-01-K413



SHEET NOTES:

1.

LEAD	a	b
NGTA	1	2B
NGTB	3	4B
NGTC	5	6B
NGTD	7	8B
NGTE	1	2T
NGTF	3	4T
NGTG	5	6T
NGTH	7	8T

2. OPTION ASSIGNMENT:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-K414

MISCELLANEOUS INPUTS
TO NUMBER GROUPS

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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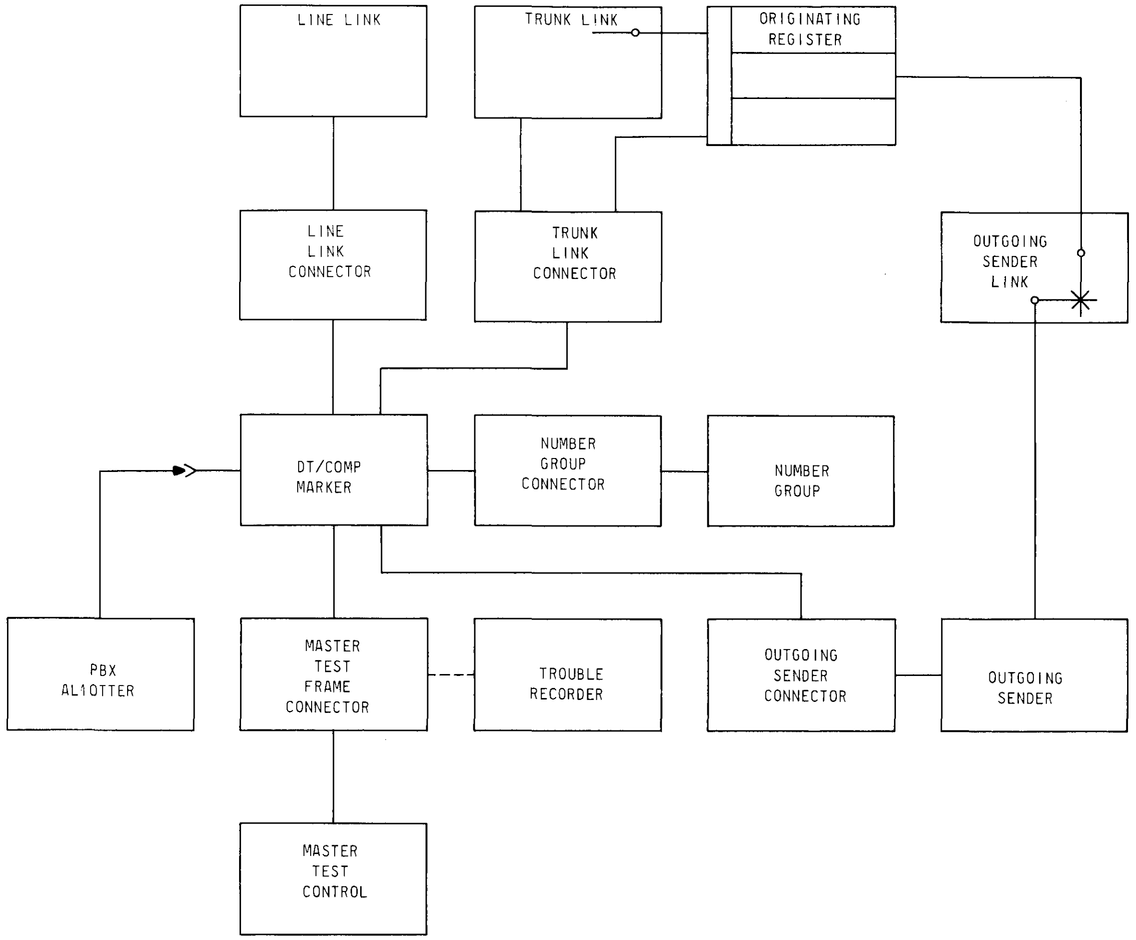

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K503	SEQUENCE CHART - LINE LINK SEIZURE (ORIG/INC CLASS)
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K505	CHECK OF LL INPUT TO CM
K506	LINE LINK FRAME INPUTS TO COMPLETING MARKER
K507	VERTICAL GROUP INPUT TO COMPLETING MARKER
K508	VERTICAL FILE AND HORIZONTAL GROUP INPUTS TO COMPLETING MARKER
K509	RESERVED
K510	LINE LINK FRAME SEIZURE
K511	LINE LINK FRAME SEIZURE
K512	VERTICAL FILE INPUT TO DIAL TONE MARKER
K513	CHECK OF HORIZONTAL GROUP SELECTION
K514	PAIRED LINE LINK FRAMES AUXILIARY LINE LINK FRAME SEIZURE
K515	LINE LINK FRAME CONTROLS
K516	CLASS OF SERVICE INPUT TO MARKER (20,30,60 CLASSES OF SERVICE) DT CLASS
K517	CLASS OF SERVICE INPUT TO MARKER (100 CLASSES OF SERVICE) DT CLASSES
K518	CLASS OF SERVICE INPUT TO MARKER (20,30,60 CLASS OF SERVICE) ORIG AND INC CLASS
K519	CLASS OF SERVICE INPUT TO MARKER (100 CLASSES OF SERVICE) ORIG AND INC CLASS
K520	LINE LINK FRAME LOCKOUT

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART K5
LINE LINK SEIZURE

SFD-10-01-K501

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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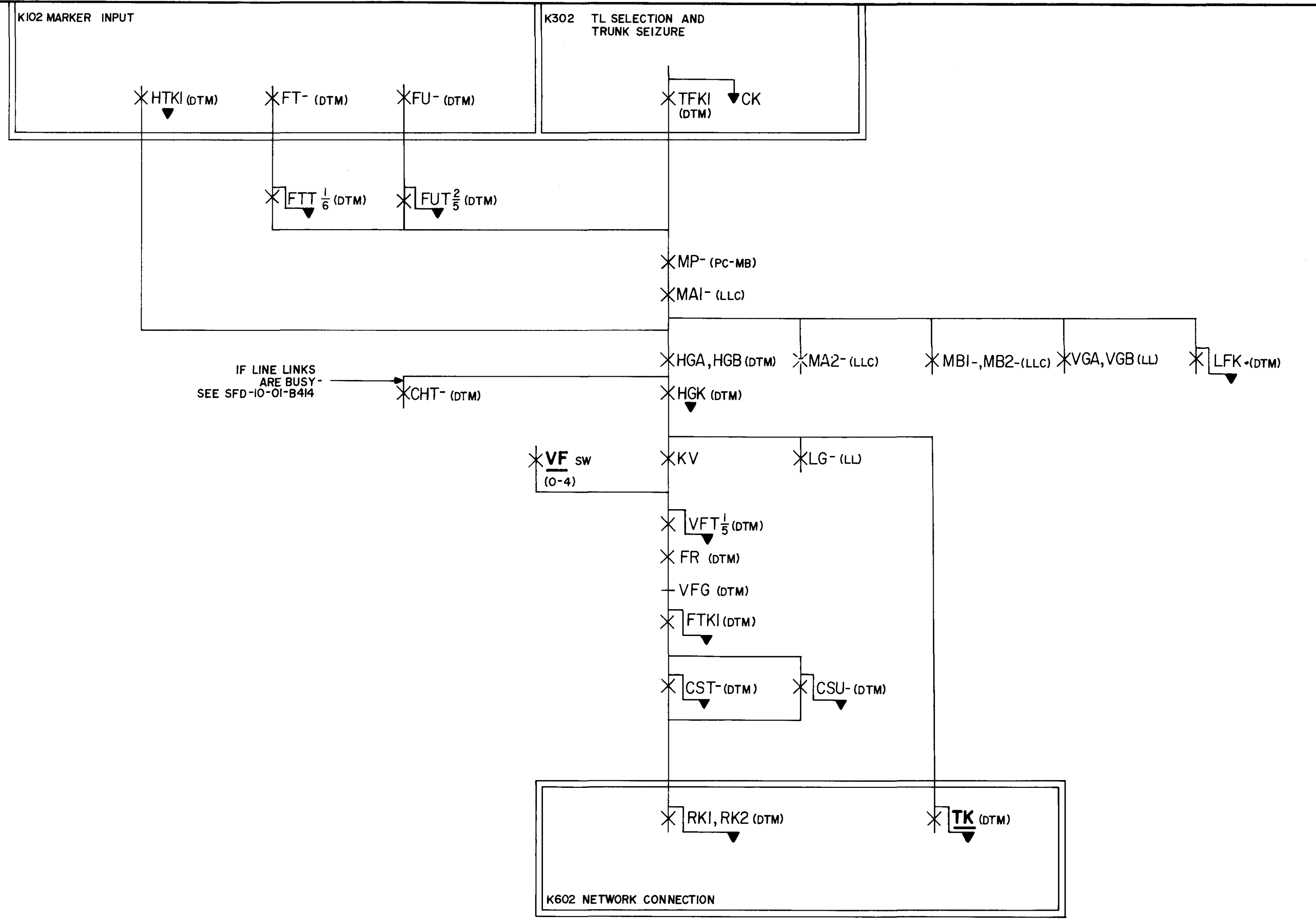

ISSUE
5

SFD-10-01-K502

SEQUENCE CHART
LL SEIZURE
(DT CLASS)

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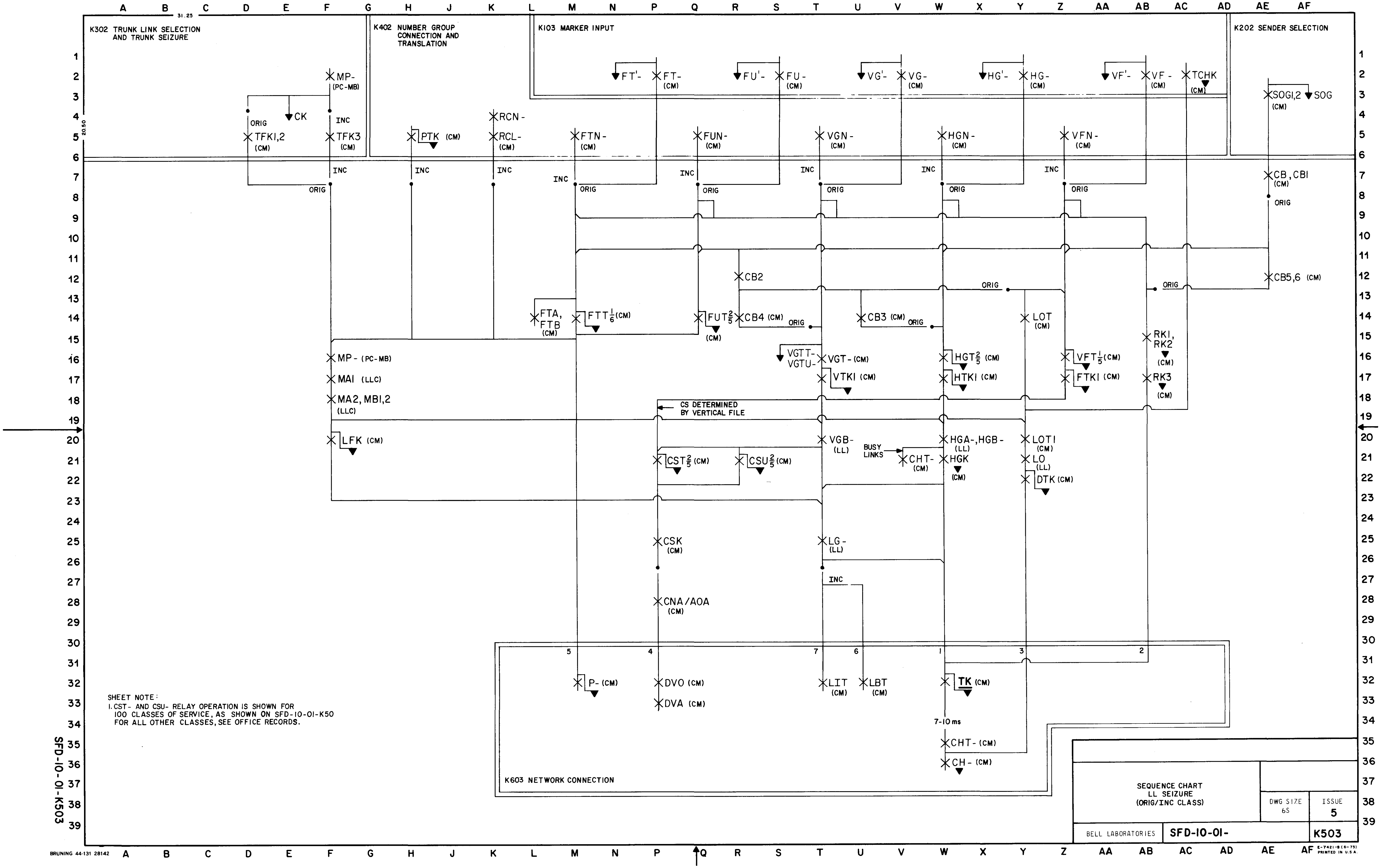
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-73)

SFD-10-01-K502



SHEET NOTE:

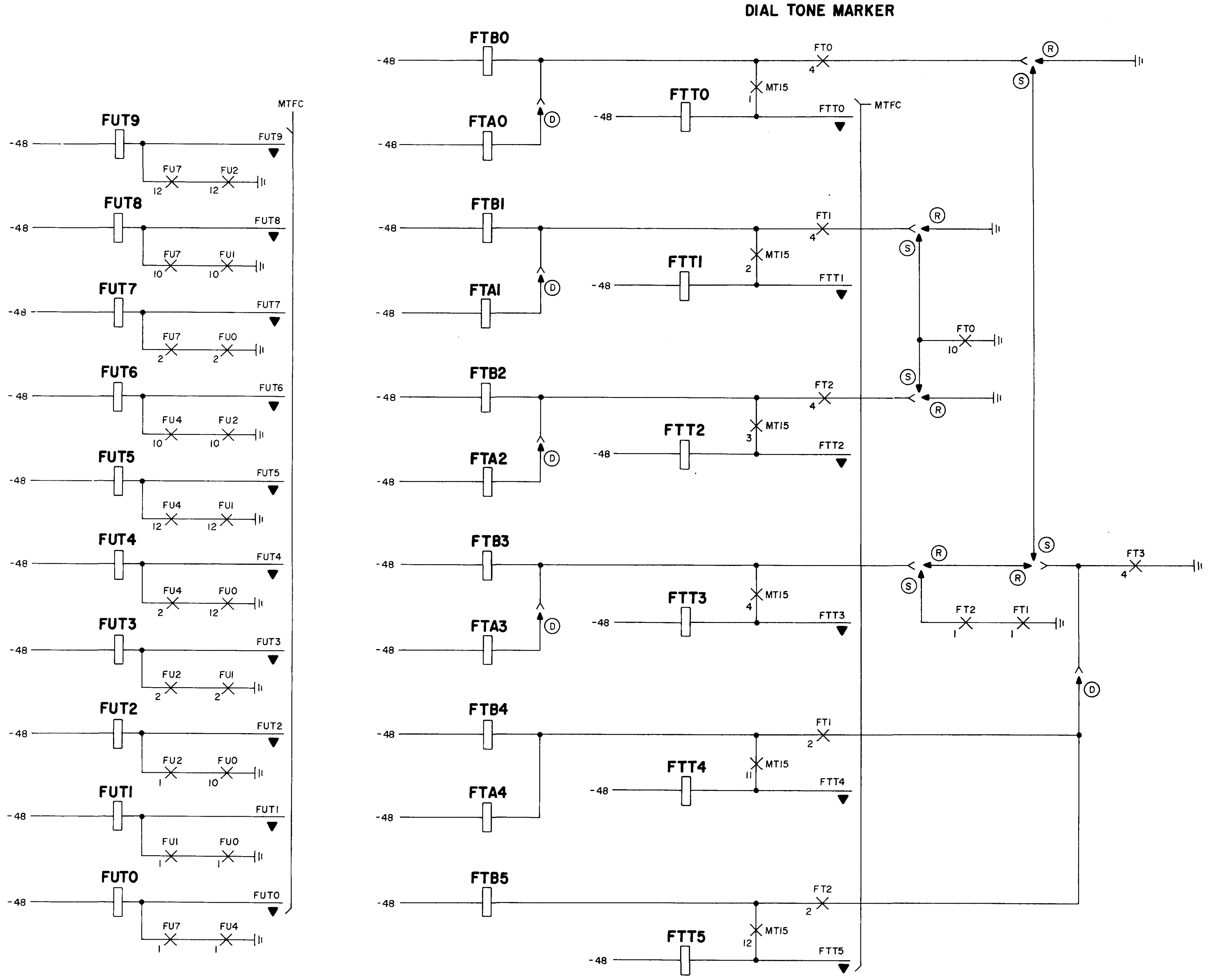
1. CST- AND CSU- RELAY OPERATION IS SHOWN FOR 100 CLASSES OF SERVICE, AS SHOWN ON SFD-10-01-K50 FOR ALL OTHER CLASSES, SEE OFFICE RECORDS.

SEQUENCE CHART
LL SEIZURE
(ORIG/INC CLASS)

BELL LABORATORIES	SFD-10-01-	DWG SIZE 6S	ISSUE 5
			K503

BRUNING 44-131 28142

E-7421-8 (6-75) PRINTED IN U.S.A.



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓓ TRIPLE TRUNK LINK FRAME OPERATION
   - Ⓡ LINE LINK FRAME TENS INDICATION ON A 1/4 BASIS
   - Ⓢ LINE LINK FRAME TENS INDICATION ON A 2/4 BASIS

ISSUE 5

SFD-10-01-K504

LINE LINK FRAME NUMBER
AUXILIARY RELAYS

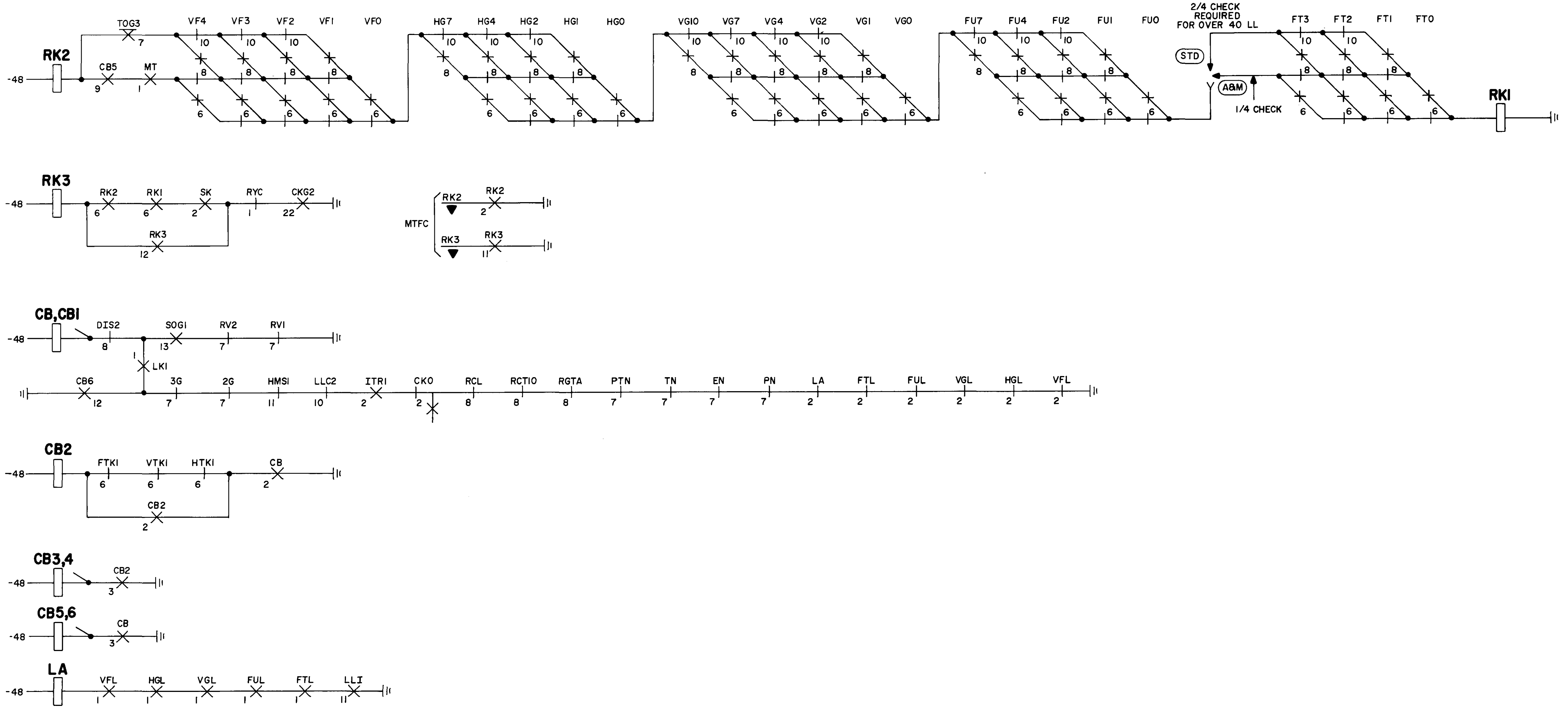
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

SFD-10-01-K504

COMPLETING MARKER

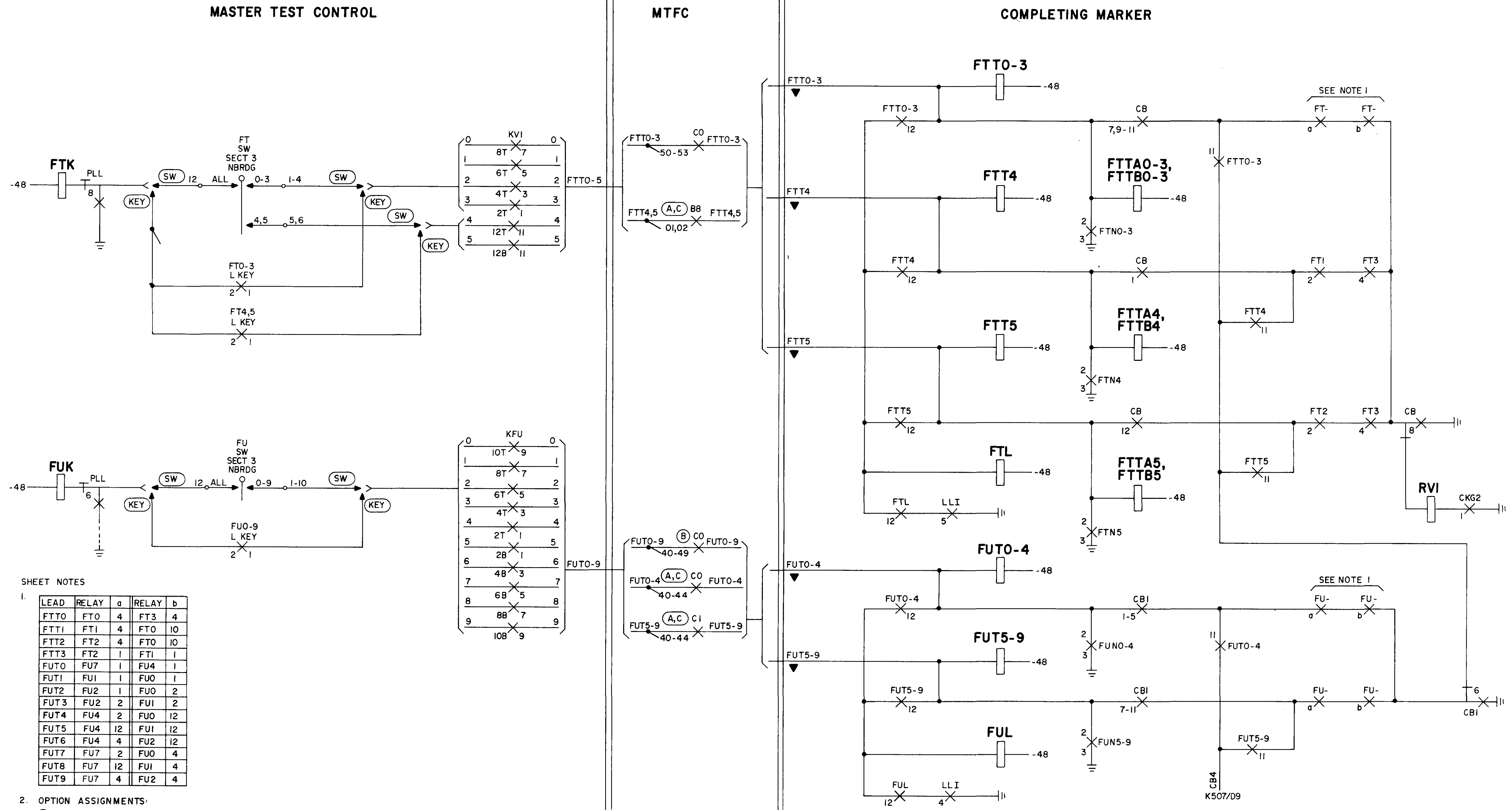


CHECK OF LL
INPUT TO CM

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES | SFD-10-01- | K505

SFD-10-01-K505



SHEET NOTES

1.

LEAD	RELAY	a	RELAY	b
FTT0	FT0	4	FT3	4
FTT1	FT1	4	FT0	10
FTT2	FT2	4	FT0	10
FTT3	FT2	1	FT1	1
FUT0	FU7	1	FU4	1
FUT1	FU1	1	FU0	1
FUT2	FU2	1	FU0	2
FUT3	FU2	2	FU1	2
FUT4	FU4	2	FU0	12
FUT5	FU4	12	FU1	12
FUT6	FU4	4	FU2	12
FUT7	FU7	2	FU0	4
FUT8	FU7	12	FU1	4
FUT9	FU7	4	FU2	4

2. OPTION ASSIGNMENTS:

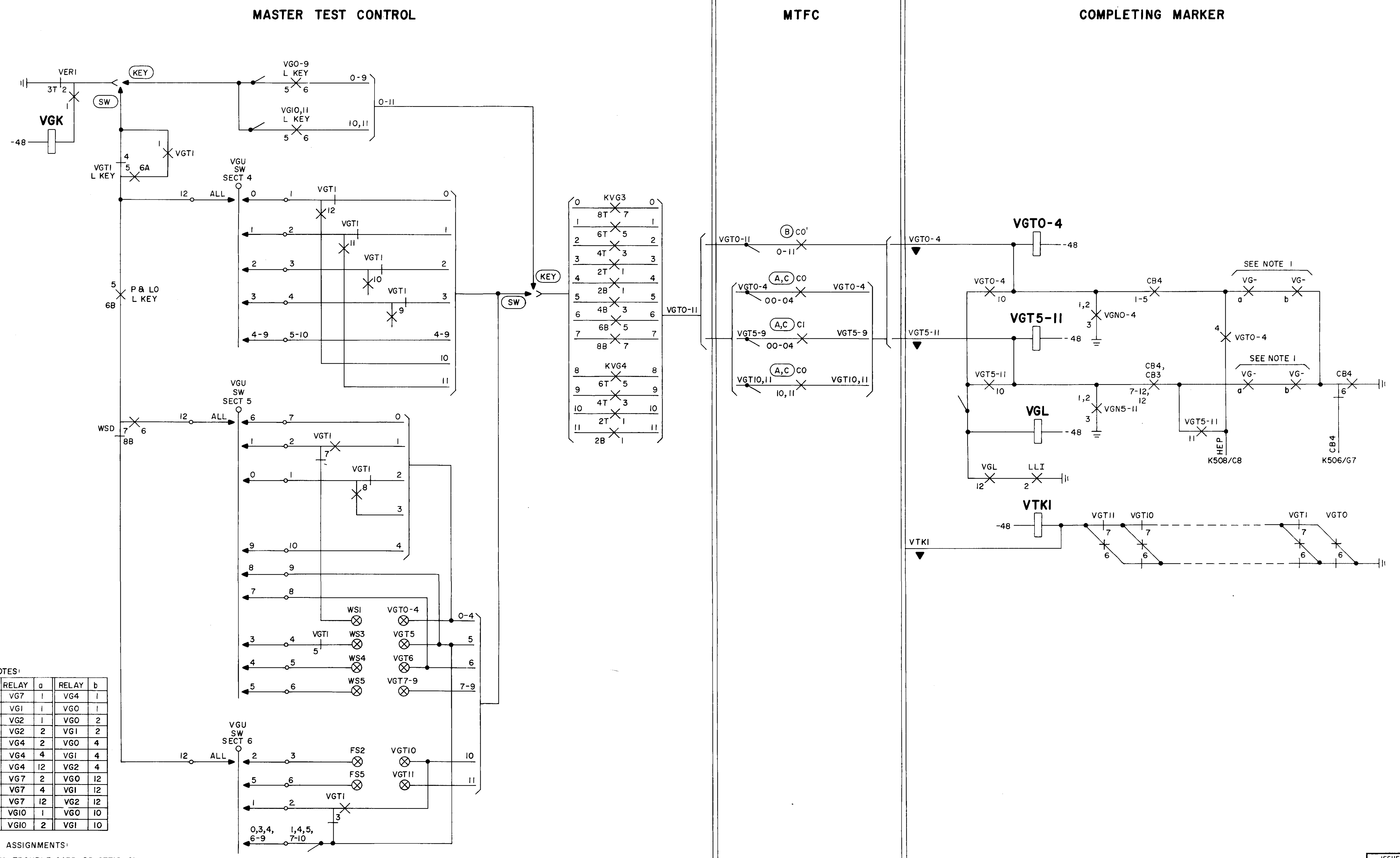
Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE	DWG SIZE	
5	6S	LINE LINK FRAME INPUTS TO COMPLETING MARKER

SFD-10-01- K506 BELL LABORATORIES



SHEET NOTES:

1.

LEAD	RELAY	a	RELAY	b
VGTO	VG7	1	VG4	1
VGT1	VG1	1	VGO	1
VGT2	VG2	1	VGO	2
VGT3	VG2	2	VG1	2
VGT4	VG4	2	VGO	4
VGT5	VG4	4	VG1	4
VGT6	VG4	12	VG2	4
VGT7	VG7	2	VGO	12
VGT8	VG7	4	VG1	12
VGT9	VG7	12	VG2	12
VGT10	VG10	1	VGO	10
VGT11	VG10	2	VG1	10

2. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE 5

VERTICAL GROUP INPUT
TO COMPLETING MARKER

SFD-10-01-K507

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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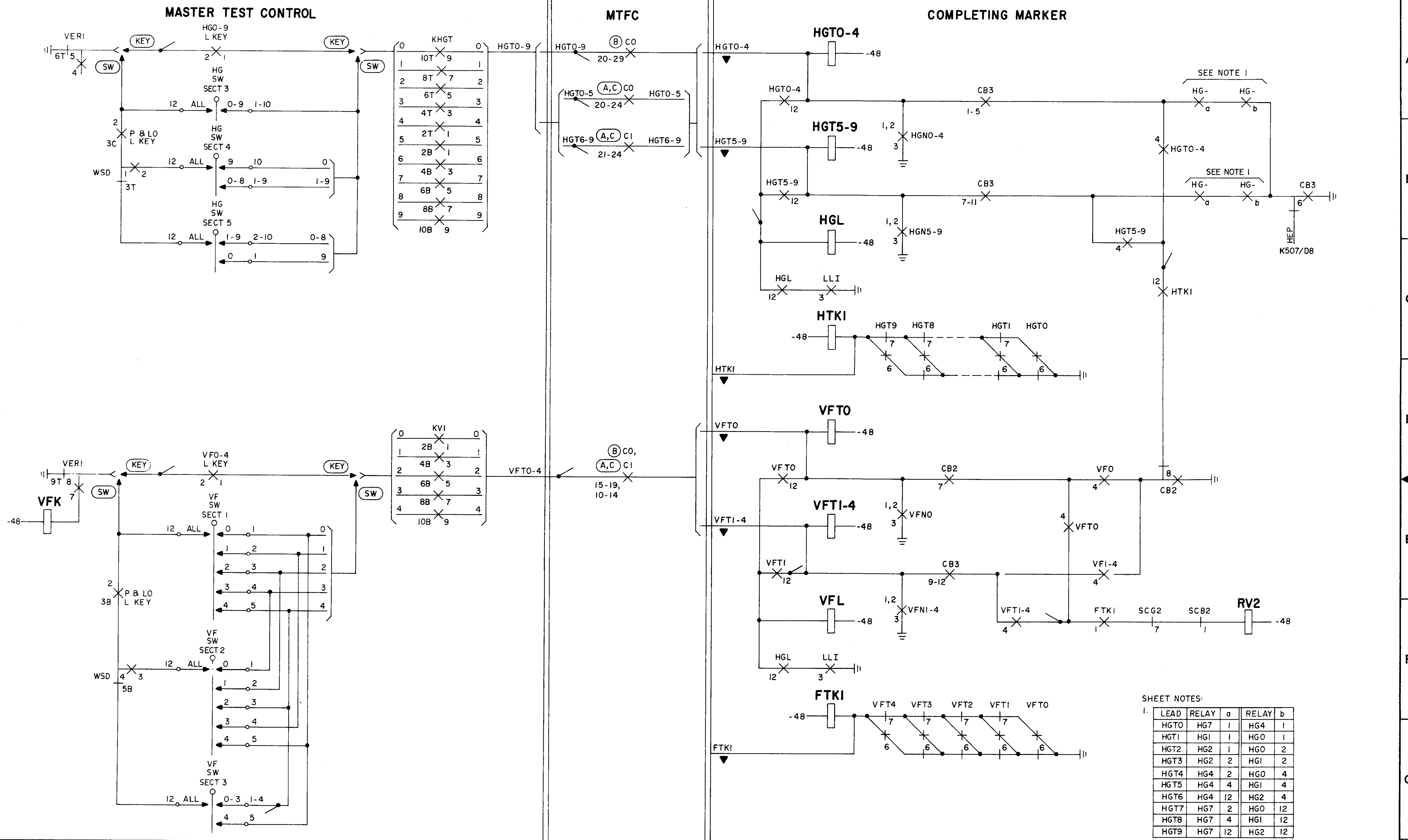
SFD-10-01-K507



SHEET NOTES:

1.

LEAD	RELAY	a	RELAY	b
HGTO	HG7	1	HG4	1
HGT1	HG1	1	HGO	1
HGT2	HG2	1	HGO	2
HGT3	HG2	2	HG1	2
HGT4	HG4	2	HGO	4
HGT5	HG4	4	HG1	4
HGT6	HG4	12	HG2	4
HGT7	HG7	2	HGO	12
HGT8	HG7	4	HG1	12
HGT9	HG7	12	HG2	12

2. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

VERTICAL FILE AND HORIZONTAL GROUP
INPUTS TO COMPLETING MARKER

ISSUE 5
DWG SIZE 6S

SFD-10-01- K508 BELL LABORATORIES

K&E 19 1153 2-77 41397•

E-7421 (6-75)
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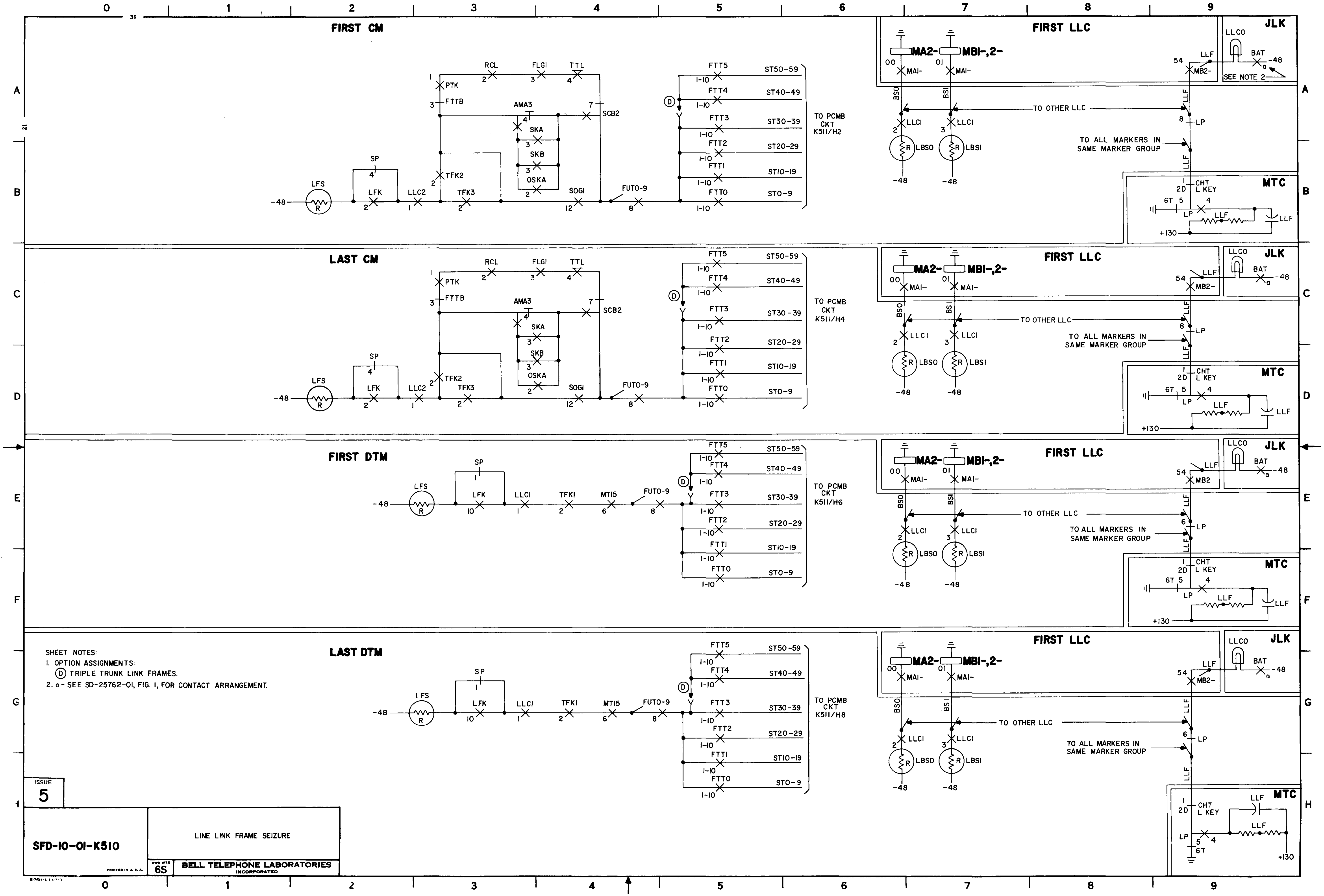

SHEET NOTES:

1. OPTION ASSIGNMENTS:
   Ⓓ TRIPLE TRUNK LINK FRAMES.
2. a - SEE SD-25762-01, FIG. 1, FOR CONTACT ARRANGEMENT.

ISSUE
5

SFD-10-01-K510

LINE LINK FRAME SEIZURE

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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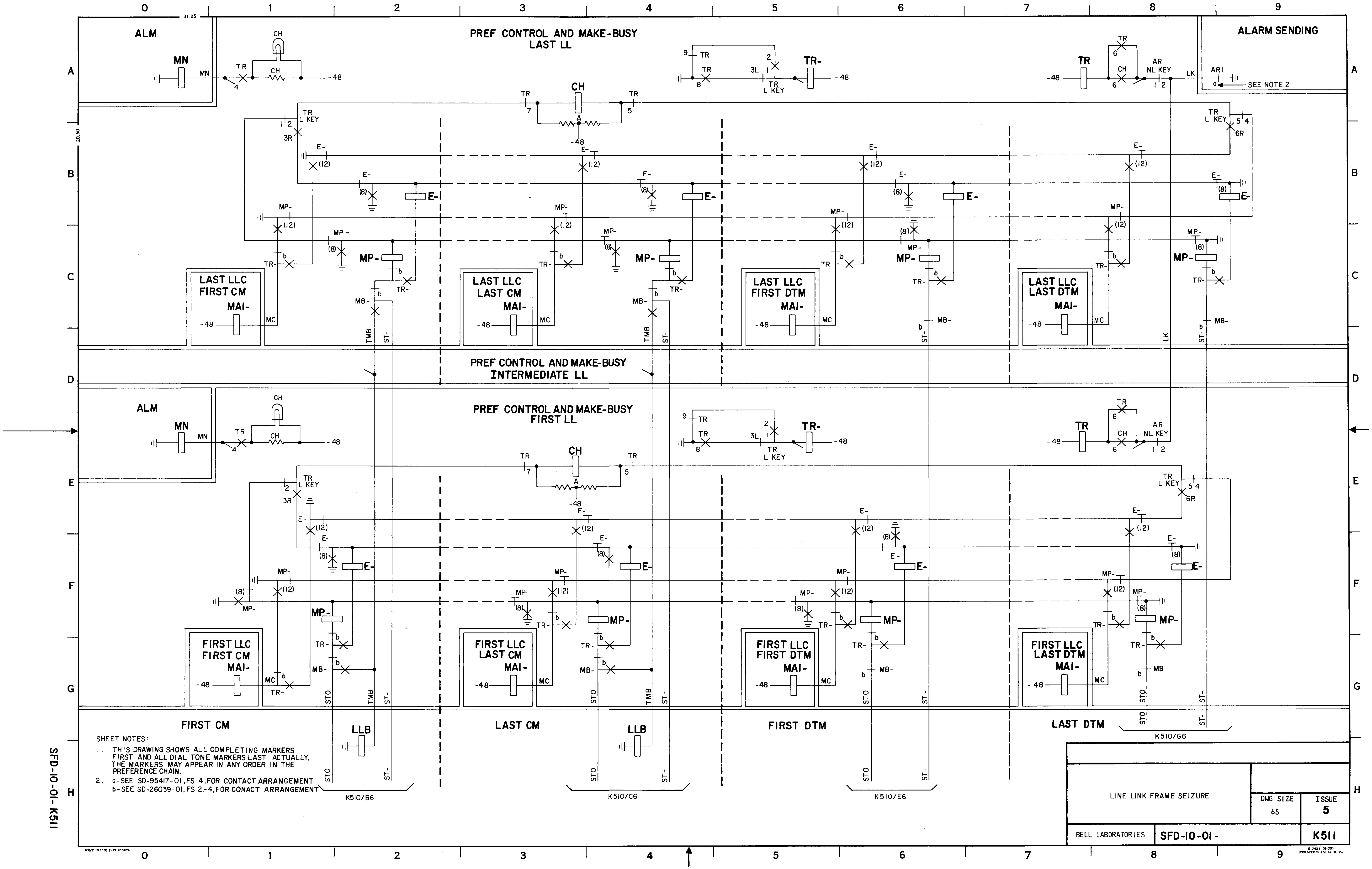
SFD-10-01-K510

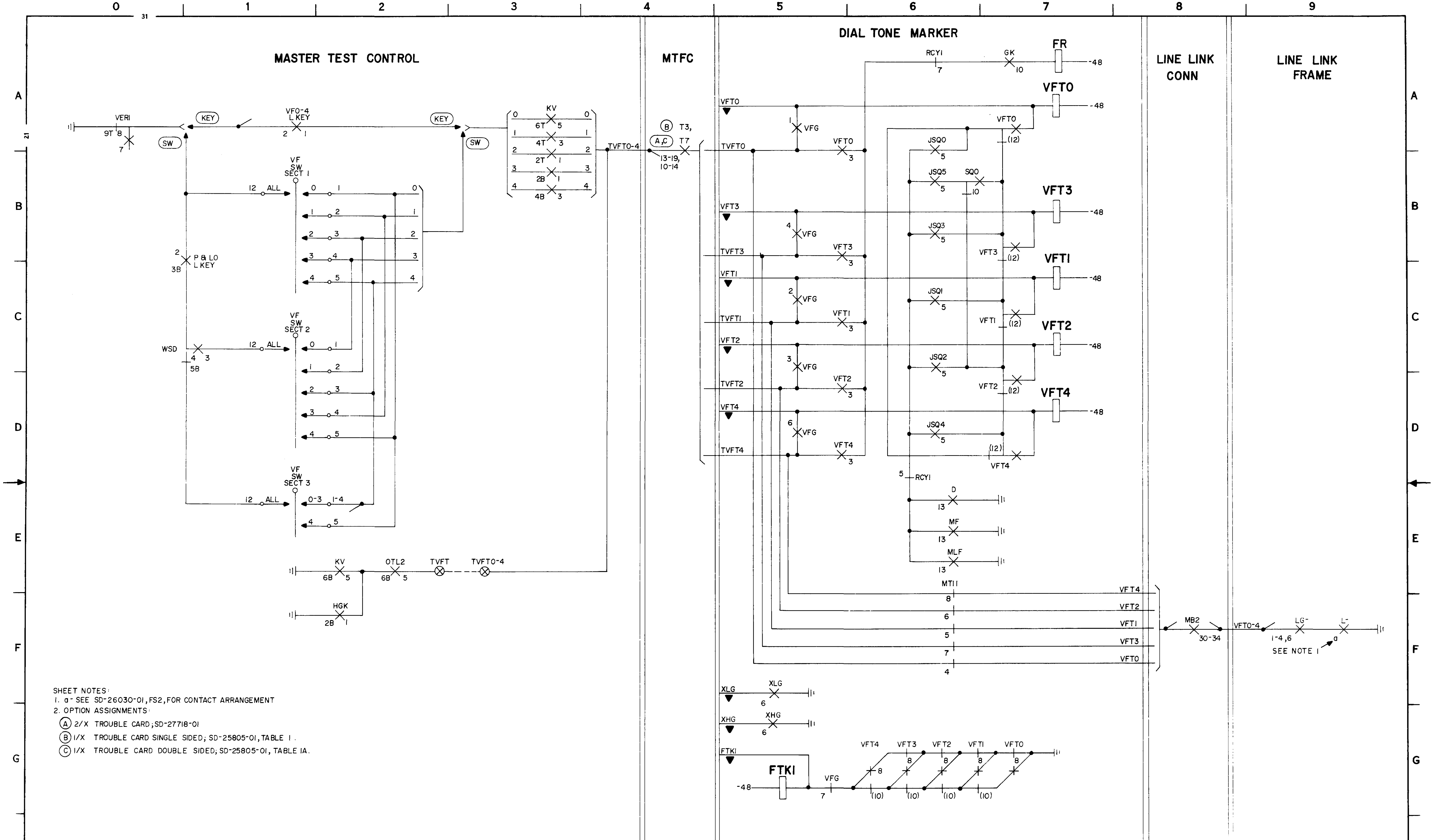


SHEET NOTES:

1. THIS DRAWING SHOWS ALL COMPLETING MARKERS FIRST AND ALL DIAL TONE MARKERS LAST. ACTUALLY, THE MARKERS MAY APPEAR IN ANY ORDER IN THE PREFERENCE CHAIN.
2. a-SEE SD-95417-01, FS 4, FOR CONTACT ARRANGEMENT
   b-SEE SD-26039-01, FS 2-4, FOR CONACT ARRANGEMENT

LINE LINK FRAME SEIZURE	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	K511

SFD-10-01-K511



SHEET NOTES:
1. a- SEE SD-26030-01, FS2, FOR CONTACT ARRANGEMENT
2. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE
5

SFD-10-01-K512

VERTICAL FILE INPUT
TO DIAL TONE MARKER

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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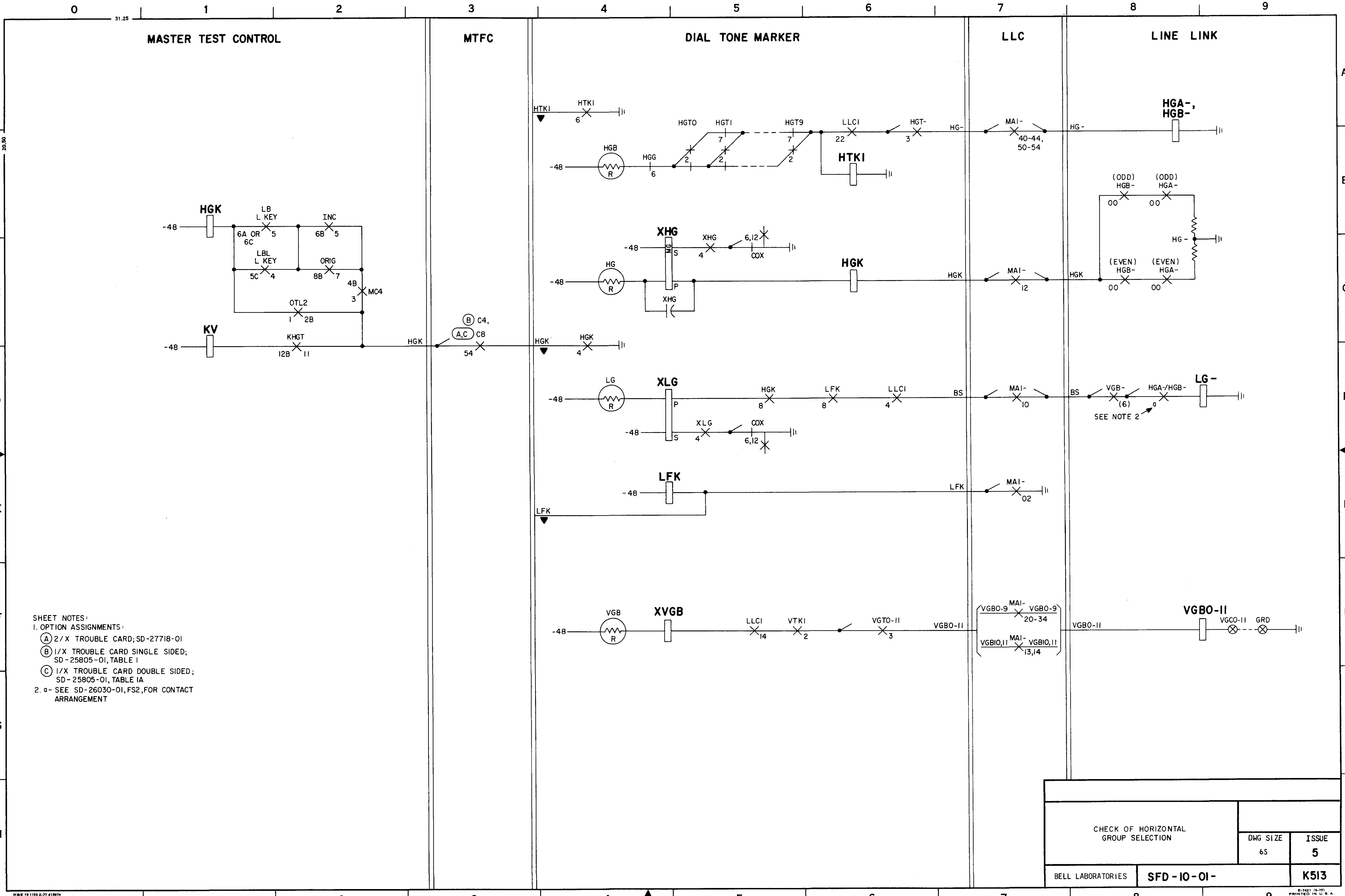
SFD-10-01-K512



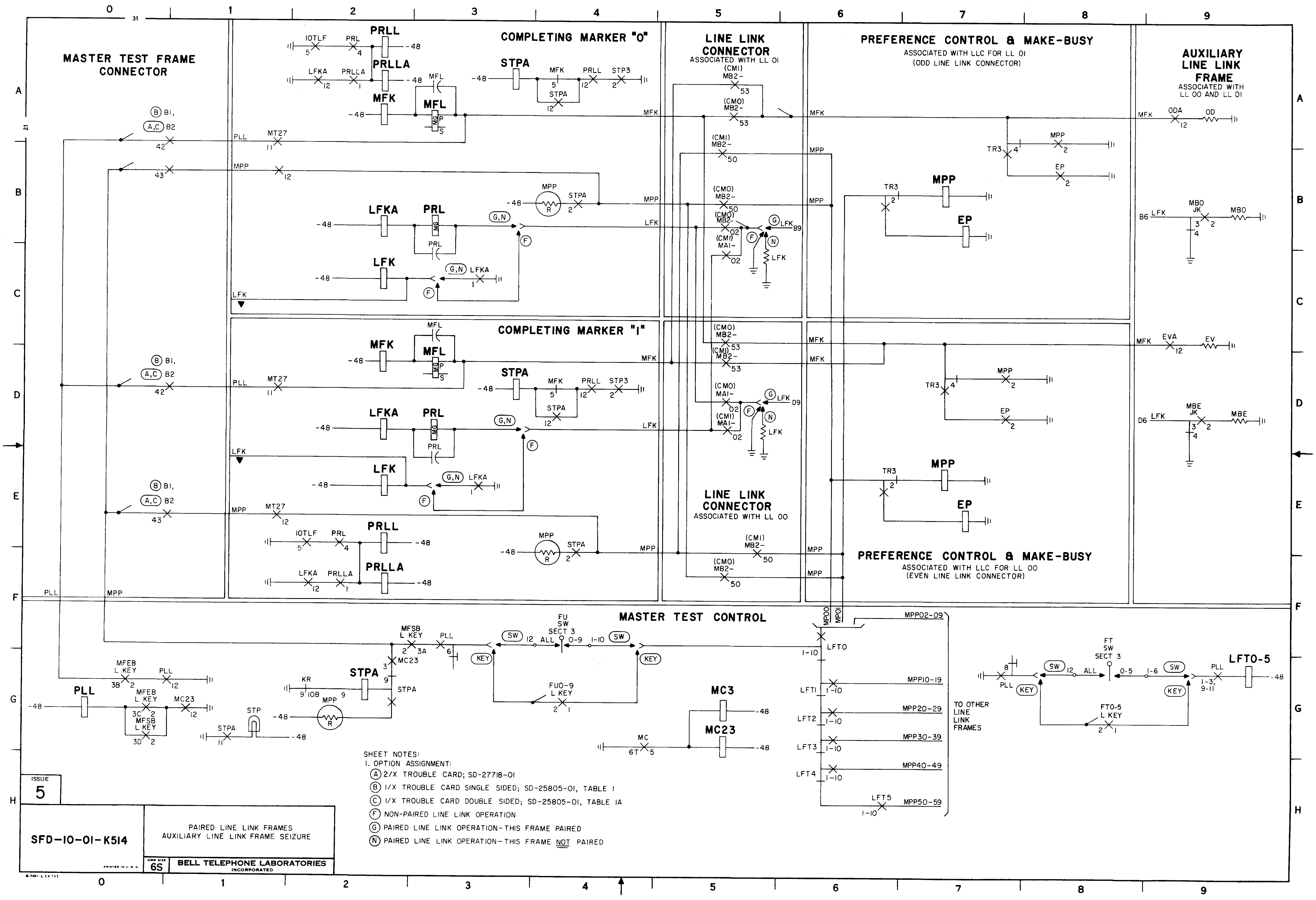
SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
2. a- SEE SD-26030-01, FS2, FOR CONTACT ARRANGEMENT

CHECK OF HORIZONTAL
GROUP SELECTION

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K513



SHEET NOTES:
1. OPTION ASSIGNMENT:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

Ⓕ NON-PAIRED LINE LINK OPERATION

Ⓖ PAIRED LINE LINK OPERATION-THIS FRAME PAIRED

Ⓝ PAIRED LINE LINK OPERATION-THIS FRAME NOT PAIRED

ISSUE 5

SFD-10-01-K514

PAIRED LINE LINK FRAMES
AUXILIARY LINE LINK FRAME SEIZURE

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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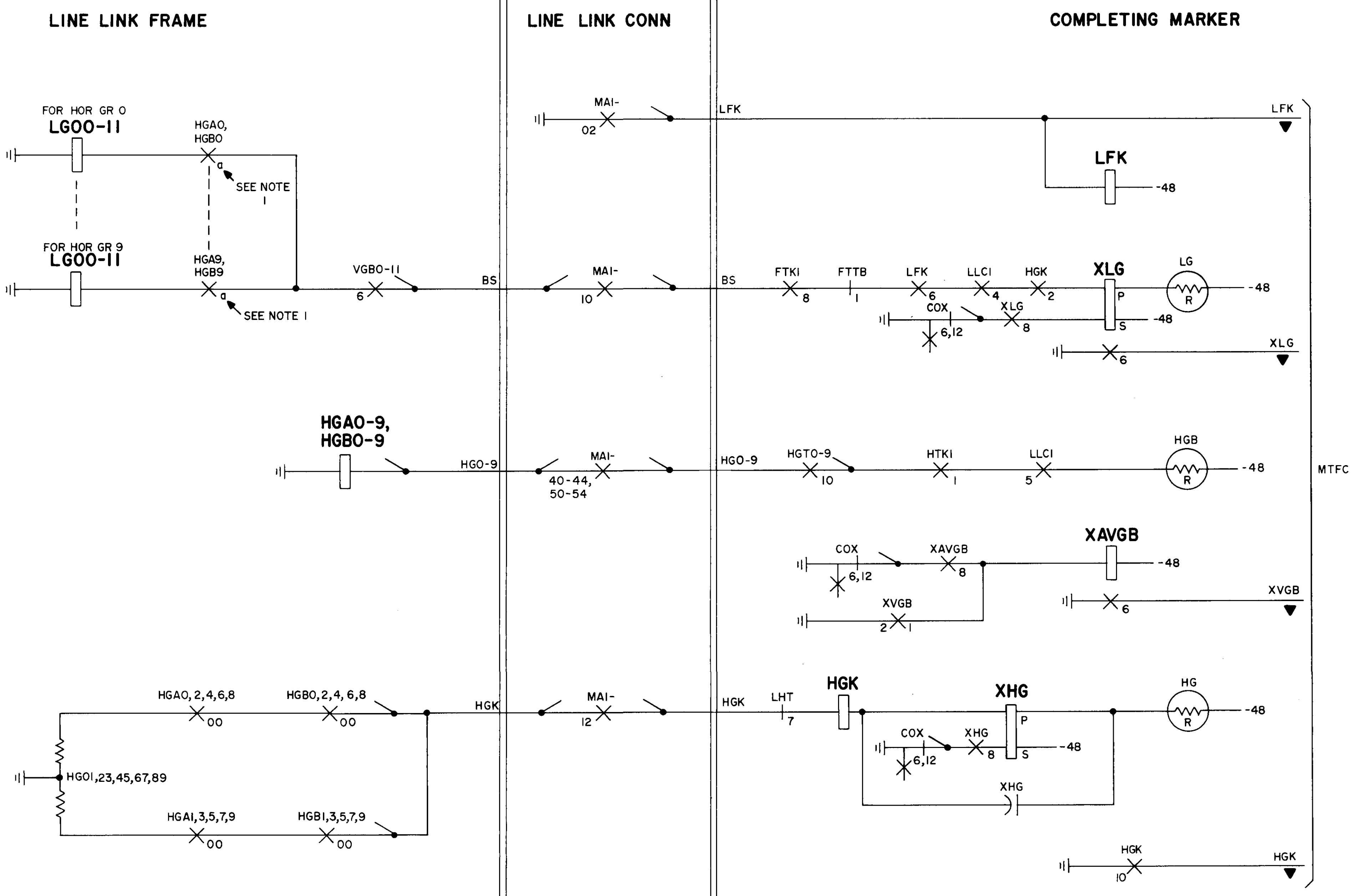
E-7481-L (4-73)

SFD-10-01-K514



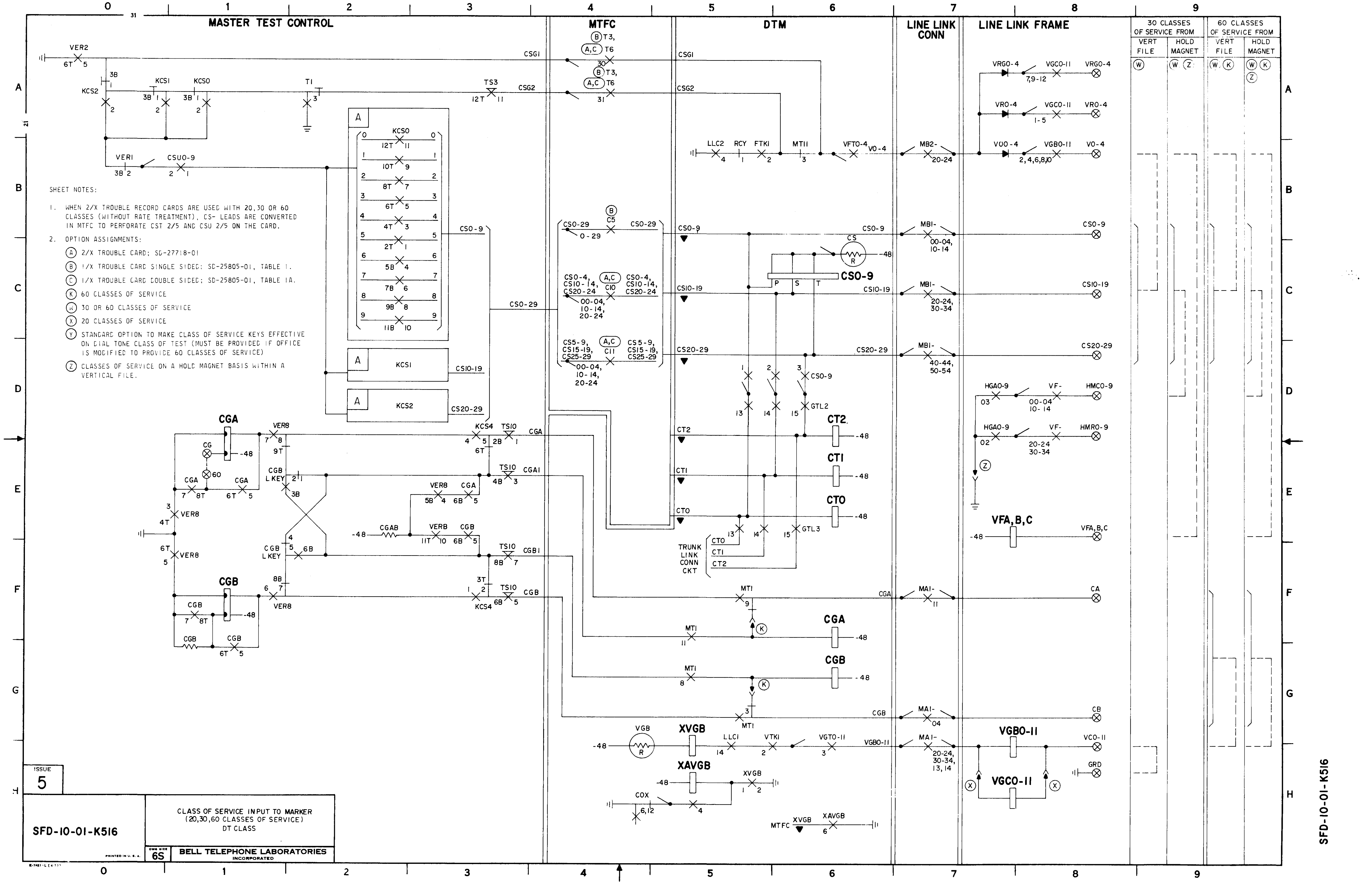
SHEET NOTES:
1. a - SEE SD-26030-01,FS2, FOR CONTACT ARRANGMENTS.

LINE LINK FRAME CONTROLS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K515

SFD-10-01-K515



SHEET NOTES:

1. WHEN 2/X TROUBLE RECORD CARDS ARE USED WITH 20,30 OR 60 CLASSES (WITHOUT RATE TREATMENT), CS- LEADS ARE CONVERTED IN MTFC TO PERFORATE CST 2/5 AND CSU 2/5 ON THE CARD.
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
   - Ⓚ 60 CLASSES OF SERVICE
   - Ⓦ 30 OR 60 CLASSES OF SERVICE
   - Ⓧ 20 CLASSES OF SERVICE
   - Ⓨ STANDARD OPTION TO MAKE CLASS OF SERVICE KEYS EFFECTIVE ON DIAL TONE CLASS OF TEST (MUST BE PROVIDED IF OFFICE IS MODIFIED TO PROVIDE 60 CLASSES OF SERVICE)
   - Ⓩ CLASSES OF SERVICE ON A HOLD MAGNET BASIS WITHIN A VERTICAL FILE.

ISSUE
5

SFD-10-01-K516

CLASS OF SERVICE INPUT TO MARKER
(20,30,60 CLASSES OF SERVICE)
DT CLASS

DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

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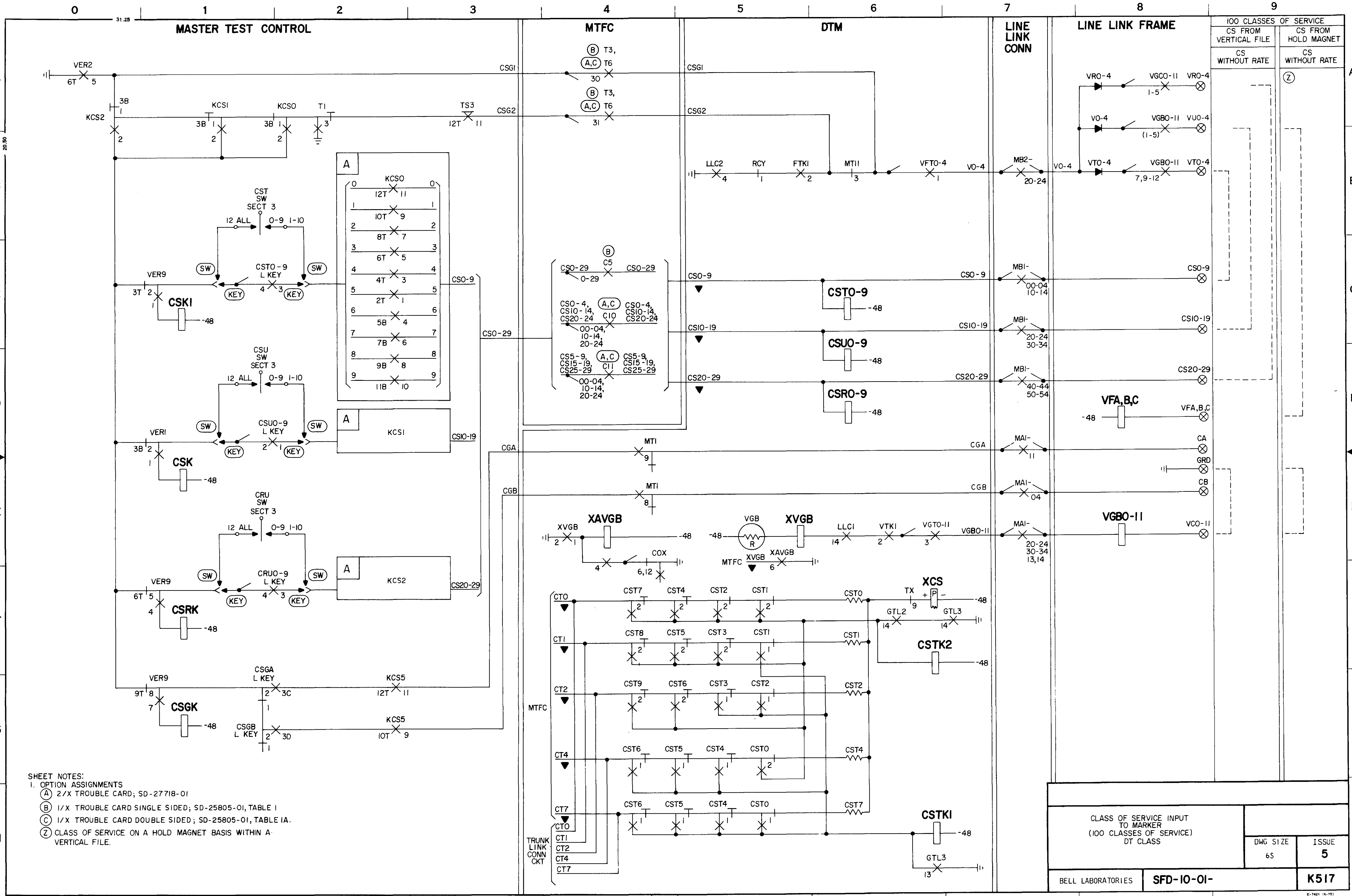
E-7421-L (4-71)



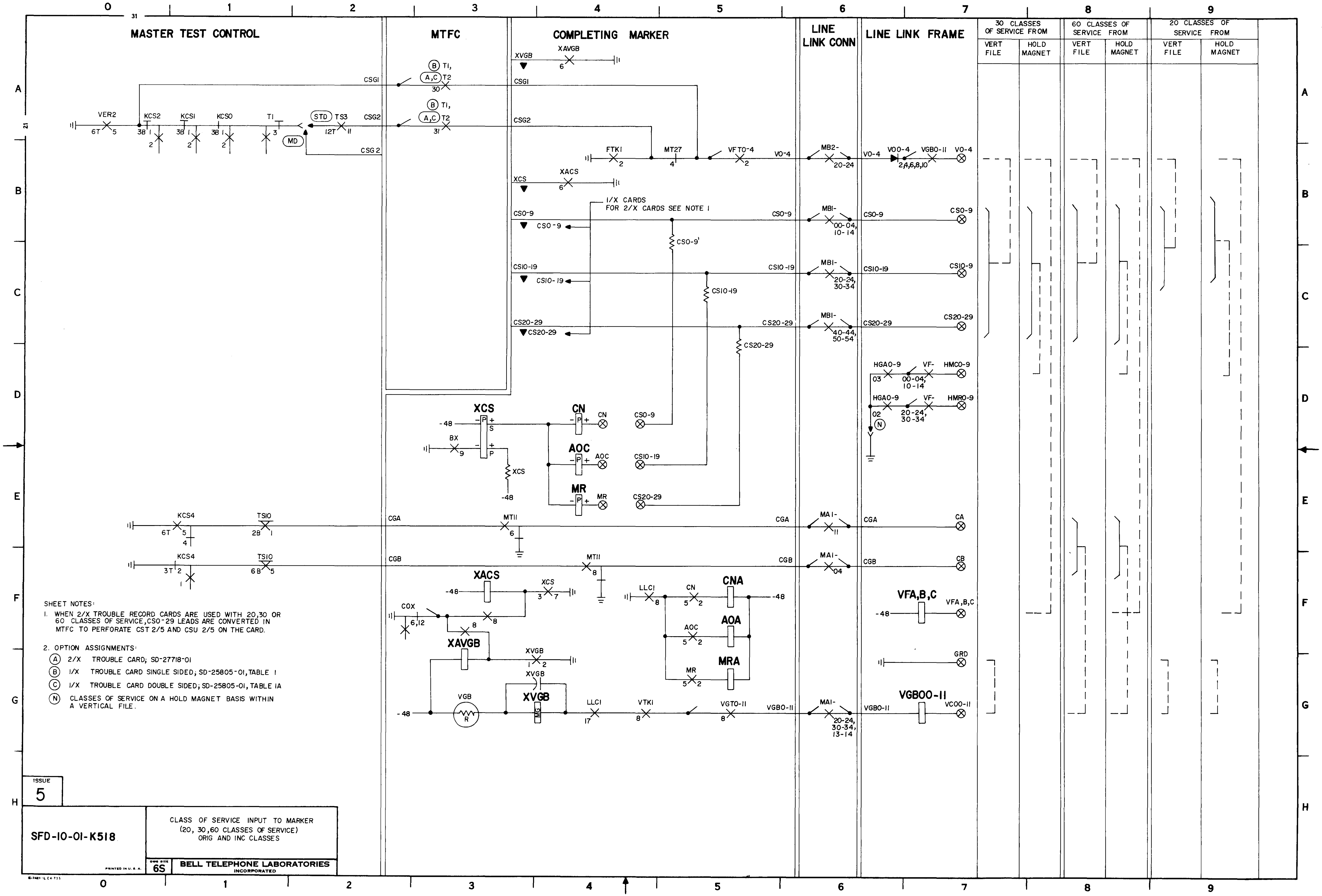
SHEET NOTES:
1. OPTION ASSIGNMENTS
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
Ⓩ CLASS OF SERVICE ON A HOLD MAGNET BASIS WITHIN A VERTICAL FILE.

CLASS OF SERVICE INPUT
TO MARKER
(100 CLASSES OF SERVICE)
DT CLASS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K517

SFD-10-01-K517



SHEET NOTES:

1. WHEN 2/X TROUBLE RECORD CARDS ARE USED WITH 20, 30 OR 60 CLASSES OF SERVICE, CS0-29 LEADS ARE CONVERTED IN MTFC TO PERFORATE CST 2/5 AND CSU 2/5 ON THE CARD.

2. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
- Ⓝ CLASSES OF SERVICE ON A HOLD MAGNET BASIS WITHIN A VERTICAL FILE.

ISSUE
5

SFD-10-01-K518

CLASS OF SERVICE INPUT TO MARKER
(20, 30, 60 CLASSES OF SERVICE)
ORIG AND INC CLASSES

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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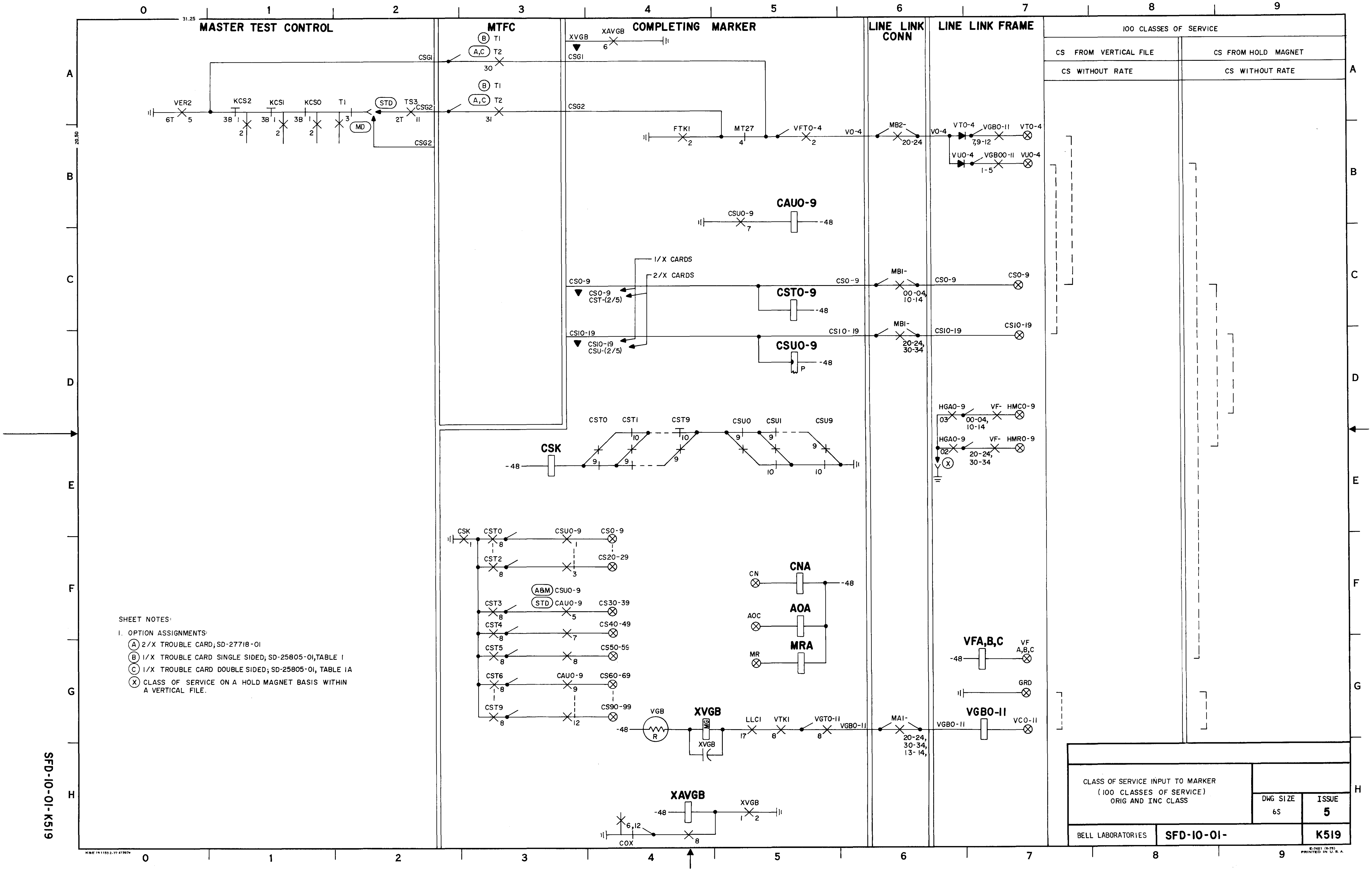
SFD-10-01-K518



SHEET NOTES:

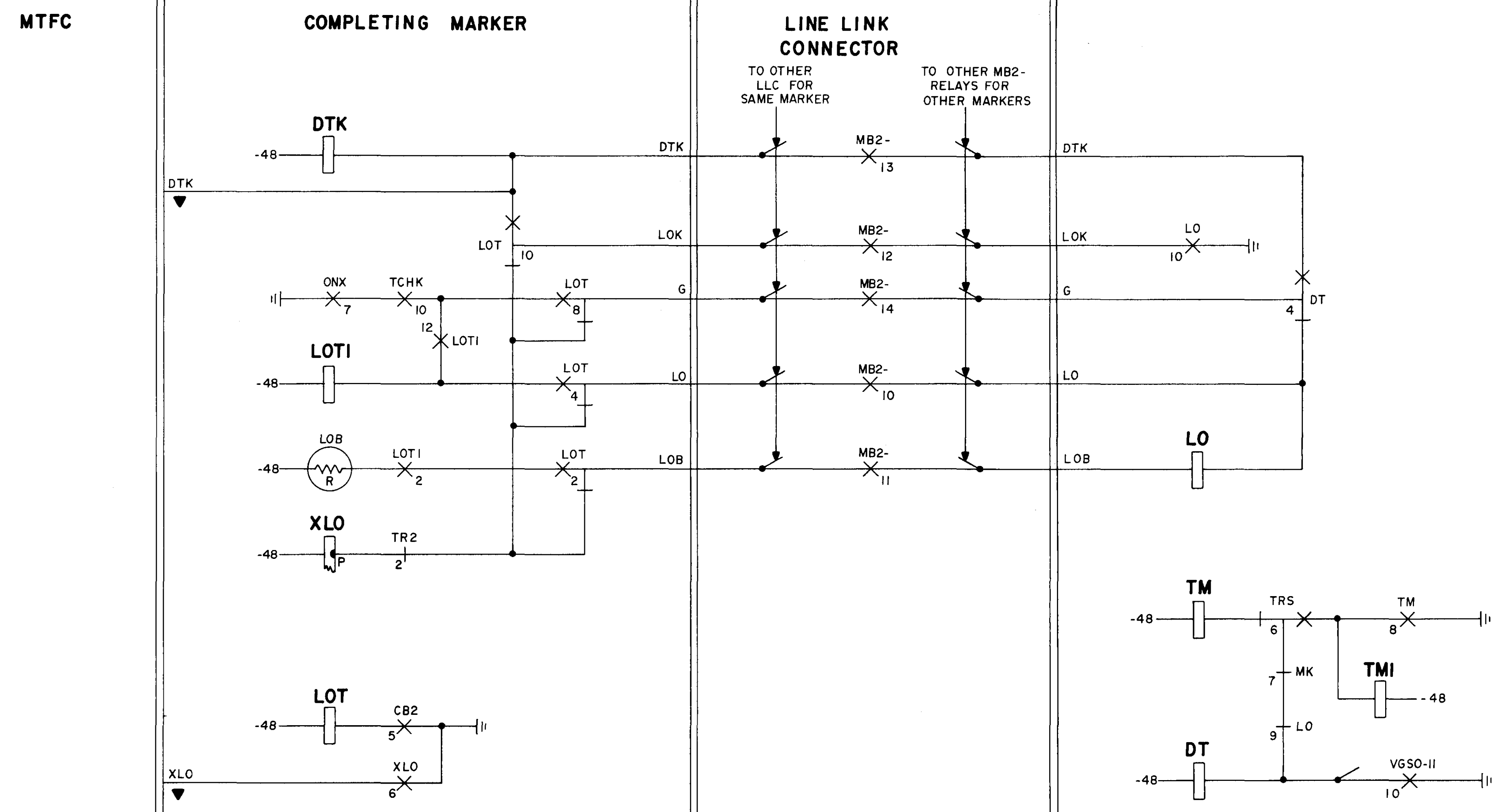
1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
   - Ⓧ CLASS OF SERVICE ON A HOLD MAGNET BASIS WITHIN A VERTICAL FILE.

CLASS OF SERVICE INPUT TO MARKER
(100 CLASSES OF SERVICE)
ORIG AND INC CLASS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES
SFD-10-01-
K519

SFD-10-01-K519



ISSUE
5

SFD-10-01-K520

LINE LINK FRAME LOCKOUT

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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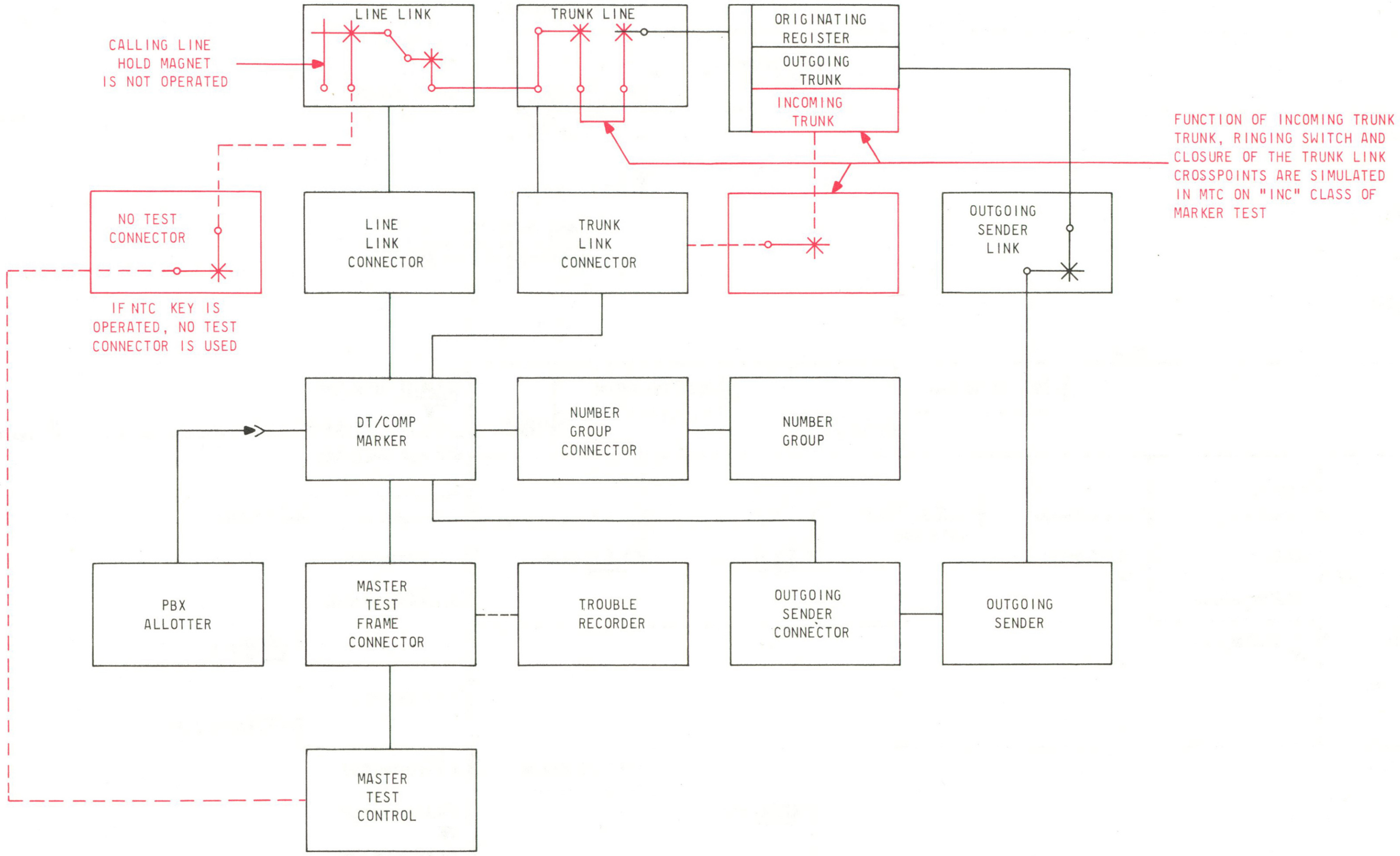
E-7481-L (4-71)


LINE LINK
TRUNK LINE
ORIGINATING REGISTER
OUTGOING TRUNK
INCOMING TRUNK
CALLING LINE HOLD MAGNET IS NOT OPERATED
FUNCTION OF INCOMING TRUNK TRUNK, RINGING SWITCH AND CLOSURE OF THE TRUNK LINK CROSSPOINTS ARE SIMULATED IN MTC ON "INC" CLASS OF MARKER TEST
NO TEST CONNECTOR
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
OUTGOING SENDER LINK
IF NTC KEY IS OPERATED, NO TEST CONNECTOR IS USED
DT/COMP MARKER
NUMBER GROUP CONNECTOR
NUMBER GROUP
PBX ALLOTTER
MASTER TEST FRAME CONNECTOR
TROUBLE RECORDER
OUTGOING SENDER CONNECTOR
OUTGOING SENDER
MASTER TEST CONTROL

INDEX

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K603	SEQUENCE CHART - NETWORK CONNECTION
K604	DIAL TONE MARKER CHANNEL TEST AND SELECTION FAILURE TO MATCH
K605	COMPLETING MARKER CHANNEL TEST AND SELECTION AND FAILURE TO MATCH
K606	RECYCLE AND ROUTE ADVANCE CONTROL
K607	RECYCLE AND ROUTE ADVANCE CONTROL
K608	DIAL TONE/COMPLETING MARKER CHANNEL TEST CONTROL
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K614	HOLD MAGNET SIMULATION AND CONTROL
K615	NO. TEST CONNECTOR
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K620	DIAL TONE MARKER CONTINUITY AND FALSE CROSS AND GROUND TEST
K621	COMPLETING MARKER CONTINUITY AND FALSE CROSS AND GROUND TEST
K622	SIMULATED RINGING SELECTION SWITCH
K623	TRUNK CHARGING
K624	MASTER TEST CONTROL

CAUTION !

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

SFD-10-01-K601
2 SHEETS, SHEET 1

ISSUE
5

PART K6
NETWORK CONNECTION

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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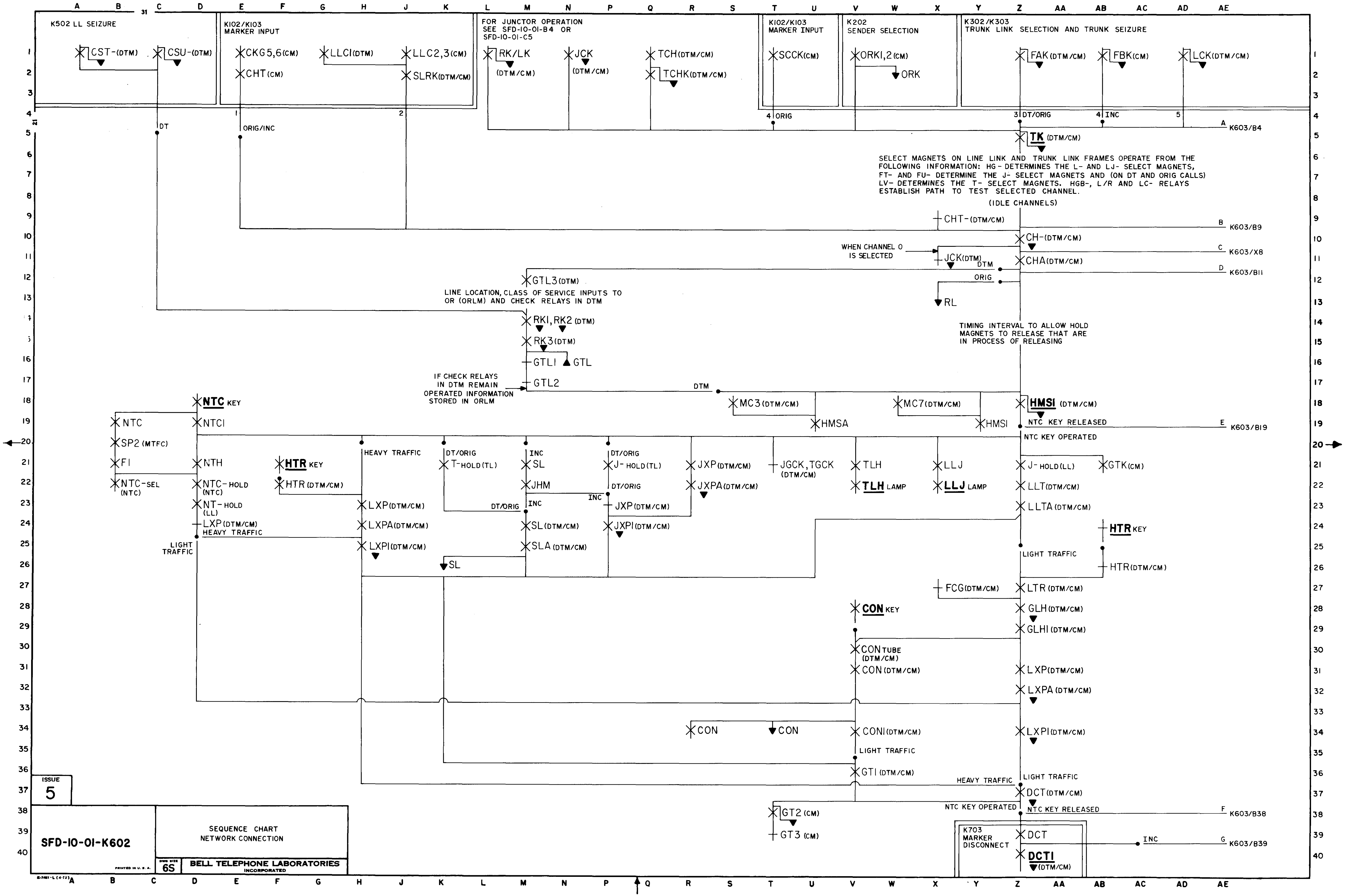
SFD-10-01-K601

E-7421 (10-71)



SELECT MAGNETS ON LINE LINK AND TRUNK LINK FRAMES OPERATE FROM THE FOLLOWING INFORMATION: HG- DETERMINES THE L- AND LJ- SELECT MAGNETS, FT- AND FU- DETERMINE THE J- SELECT MAGNETS AND (ON DT AND ORIG CALLS) LV- DETERMINES THE T- SELECT MAGNETS. HGB-, L/R AND LC- RELAYS ESTABLISH PATH TO TEST SELECTED CHANNEL.

LINE LOCATION, CLASS OF SERVICE INPUTS TO OR (ORLM) AND CHECK RELAYS IN DTM

TIMING INTERVAL TO ALLOW HOLD MAGNETS TO RELEASE THAT ARE IN PROCESS OF RELEASING

ISSUE
5

SFD-10-01-K602

SEQUENCE CHART
NETWORK CONNECTION

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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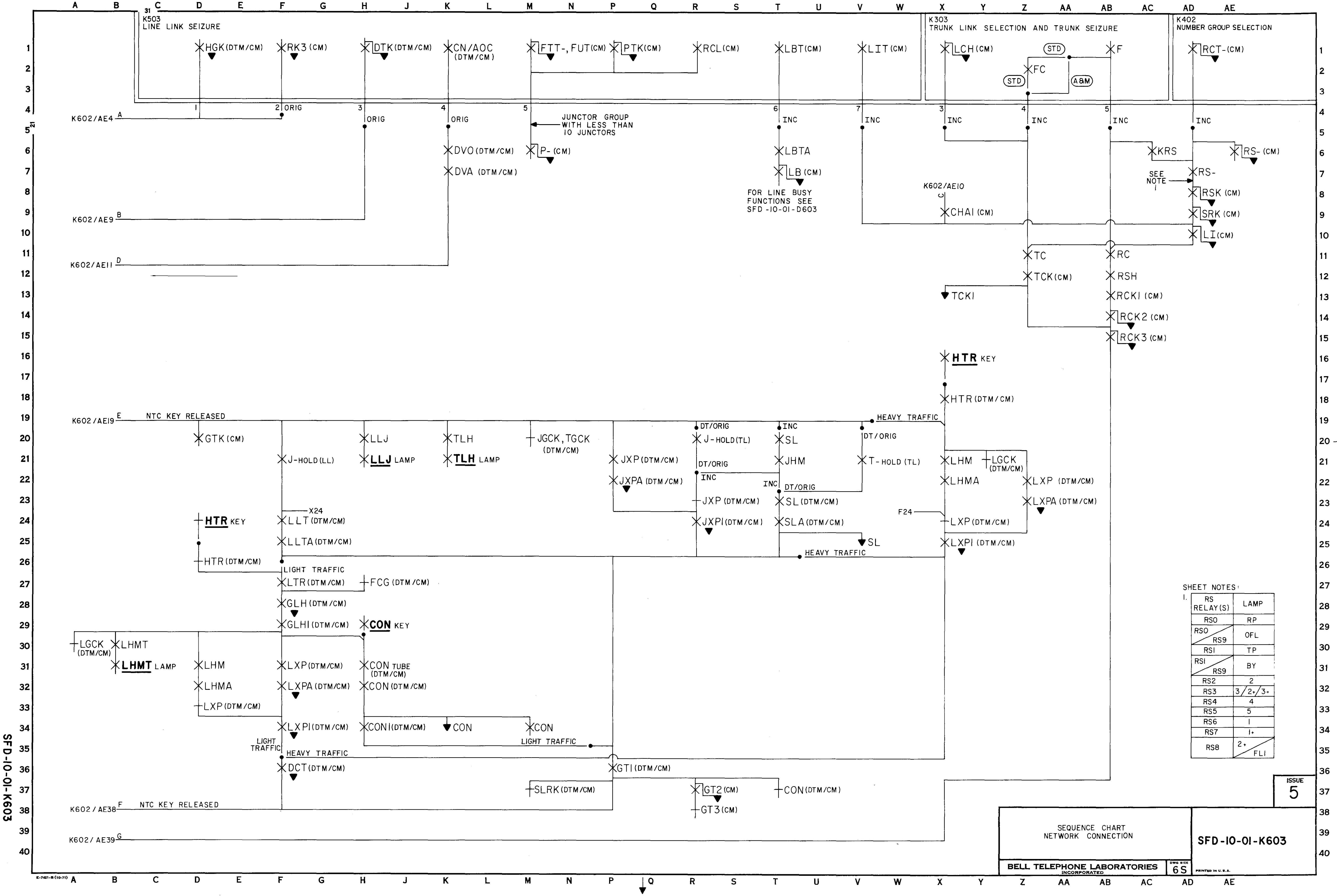
E-7481-L (4-73)

SFD-10-01-K602



SHEET NOTES:

1.

RS RELAY(S)	LAMP
RS0	RP
RS0 / RS9	OFL
RS1	TP
RS1 / RS9	BY
RS2	2
RS3	3/2+/3+
RS4	4
RS5	5
RS6	1
RS7	1+
RS8	2+ / FL1

ISSUE
5

SEQUENCE CHART
NETWORK CONNECTION

SFD-10-01-K603

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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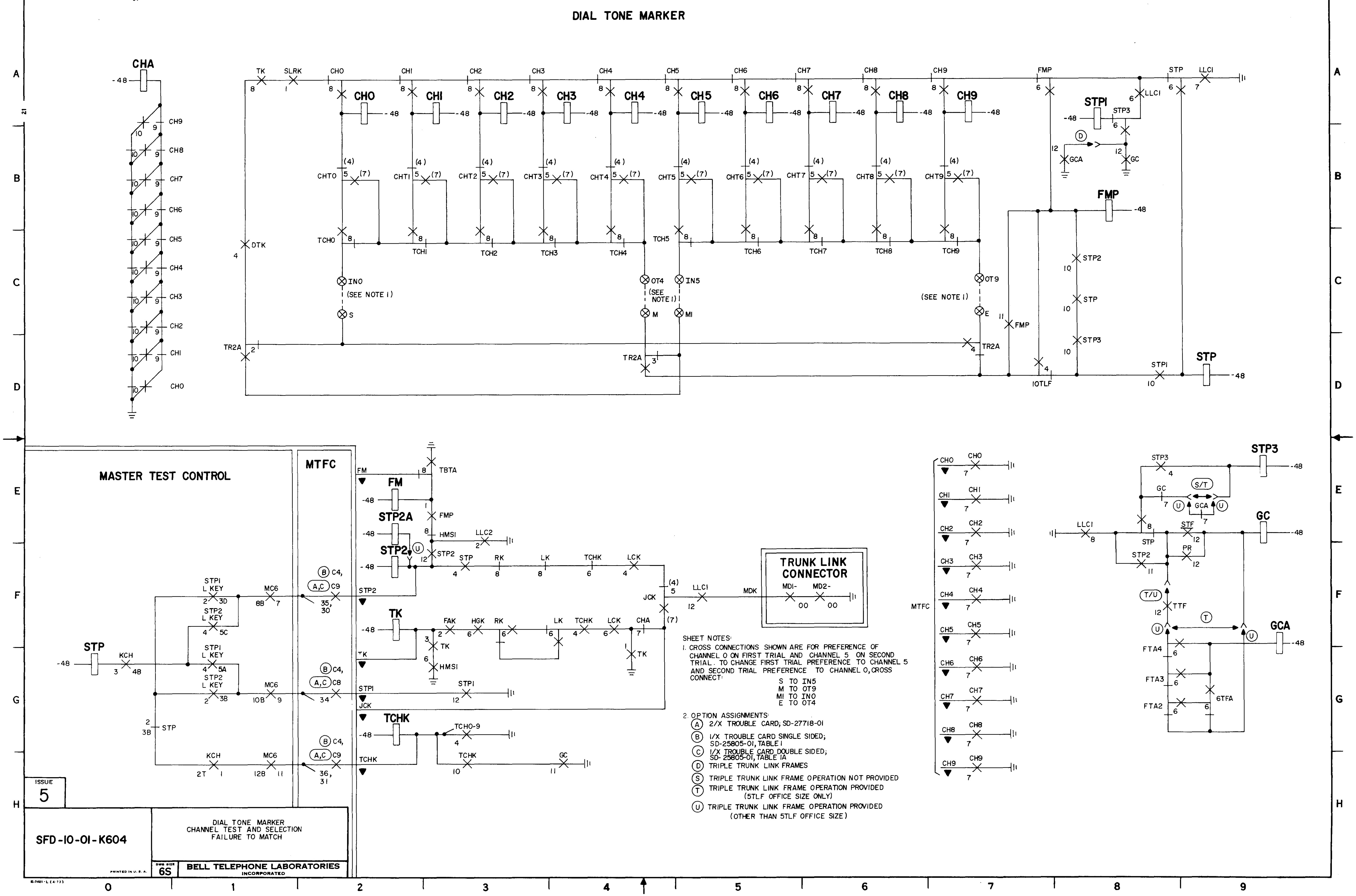

SHEET NOTES:

1. CROSS CONNECTIONS SHOWN ARE FOR PREFERENCE OF CHANNEL 0 ON FIRST TRIAL AND CHANNEL 5 ON SECOND TRIAL. TO CHANGE FIRST TRIAL PREFERENCE TO CHANNEL 5 AND SECOND TRIAL PREFERENCE TO CHANNEL 0, CROSS CONNECT:

S TO IN5
M TO OT9
M1 TO IN0
E TO OT4

2. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
Ⓓ TRIPLE TRUNK LINK FRAMES
Ⓢ TRIPLE TRUNK LINK FRAME OPERATION NOT PROVIDED
Ⓣ TRIPLE TRUNK LINK FRAME OPERATION PROVIDED (5TLF OFFICE SIZE ONLY)
Ⓤ TRIPLE TRUNK LINK FRAME OPERATION PROVIDED (OTHER THAN 5TLF OFFICE SIZE)

ISSUE
5

SFD-10-01-K604

DIAL TONE MARKER
CHANNEL TEST AND SELECTION
FAILURE TO MATCH

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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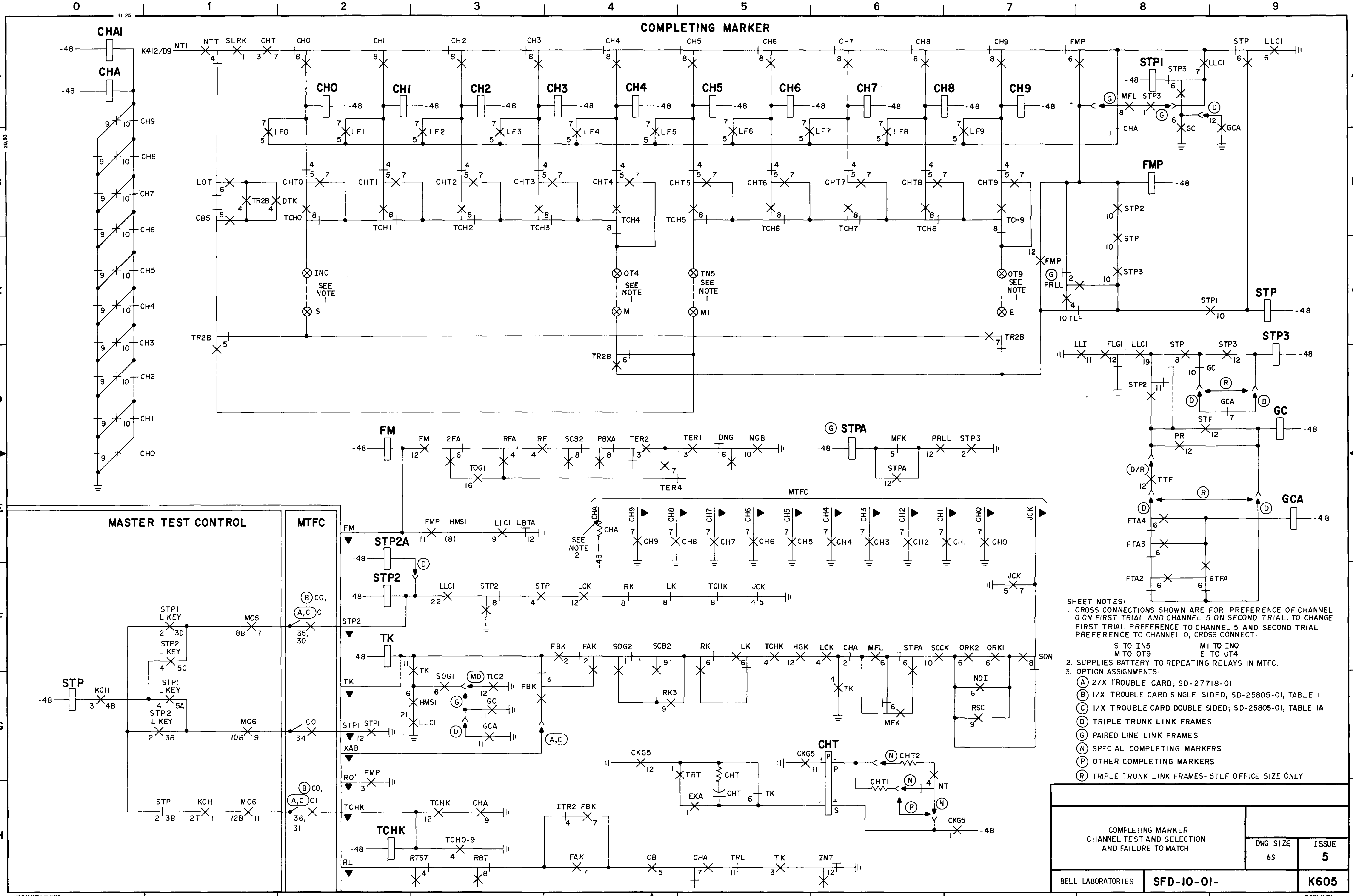
E-7421-L (4-73)

SFD-10-01-K604



SHEET NOTES:

1. CROSS CONNECTIONS SHOWN ARE FOR PREFERENCE OF CHANNEL 0 ON FIRST TRIAL AND CHANNEL 5 ON SECOND TRIAL. TO CHANGE FIRST TRIAL PREFERENCE TO CHANNEL 5 AND SECOND TRIAL PREFERENCE TO CHANNEL 0, CROSS CONNECT:

S TO IN5	MI TO IN0
M TO OT9	E TO OT4

2. SUPPLIES BATTERY TO REPEATING RELAYS IN MTFC.
3. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
   - Ⓓ TRIPLE TRUNK LINK FRAMES
   - Ⓖ PAIRED LINE LINK FRAMES
   - Ⓝ SPECIAL COMPLETING MARKERS
   - Ⓟ OTHER COMPLETING MARKERS
   - Ⓡ TRIPLE TRUNK LINK FRAMES - 5TLF OFFICE SIZE ONLY

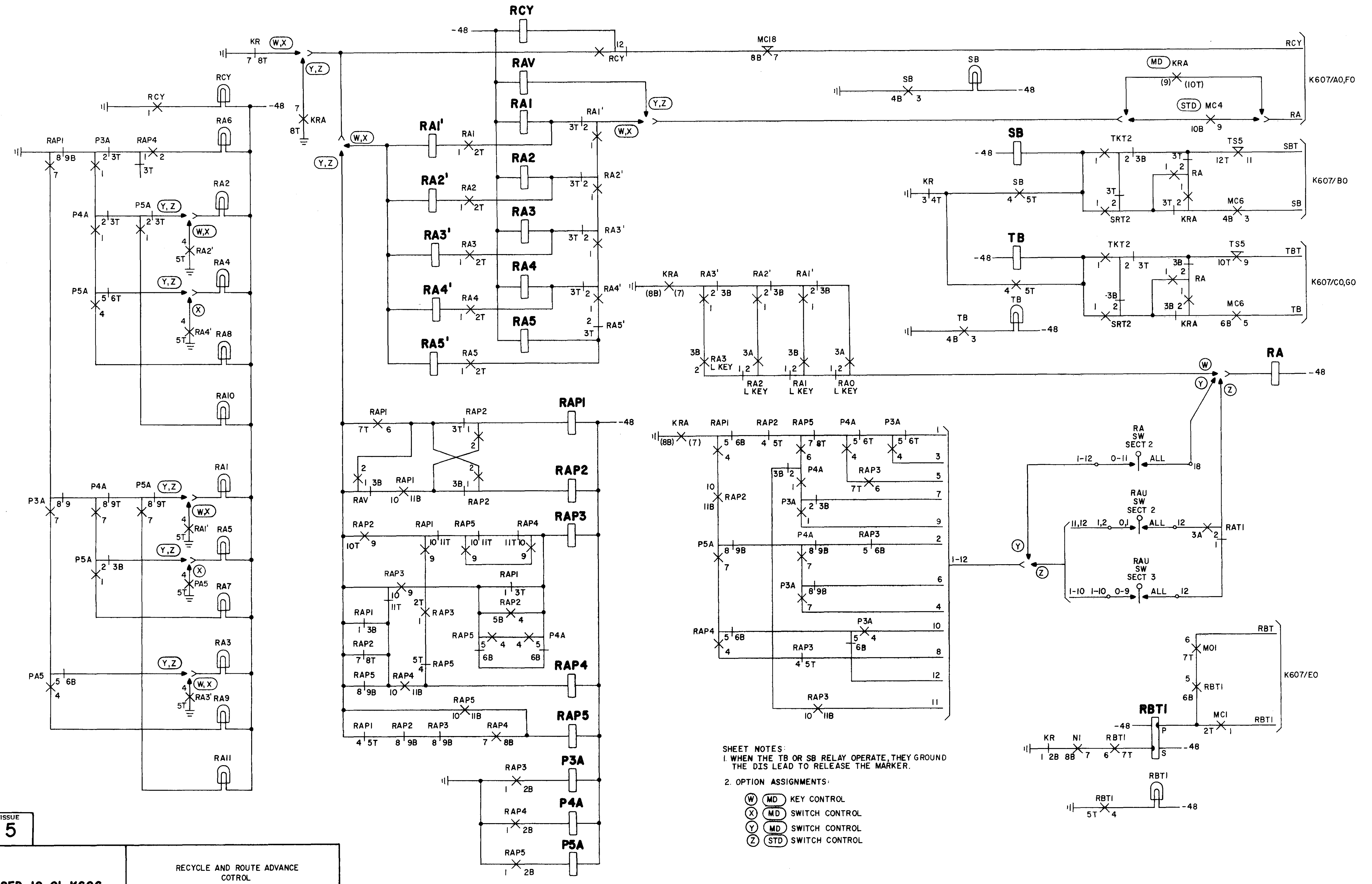
COMPLETING MARKER
CHANNEL TEST AND SELECTION
AND FAILURE TO MATCH

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K605

SFD-10-01-K605

MASTER TEST CONTROL



SHEET NOTES:

1. WHEN THE TB OR SB RELAY OPERATE, THEY GROUND THE DIS LEAD TO RELEASE THE MARKER.
2. OPTION ASSIGNMENTS:

Ⓦ (MD) KEY CONTROL
Ⓧ (MD) SWITCH CONTROL
Ⓨ (MD) SWITCH CONTROL
Ⓩ (STD) SWITCH CONTROL

ISSUE
5

SFD-10-01-K606

RECYCLE AND ROUTE ADVANCE
COTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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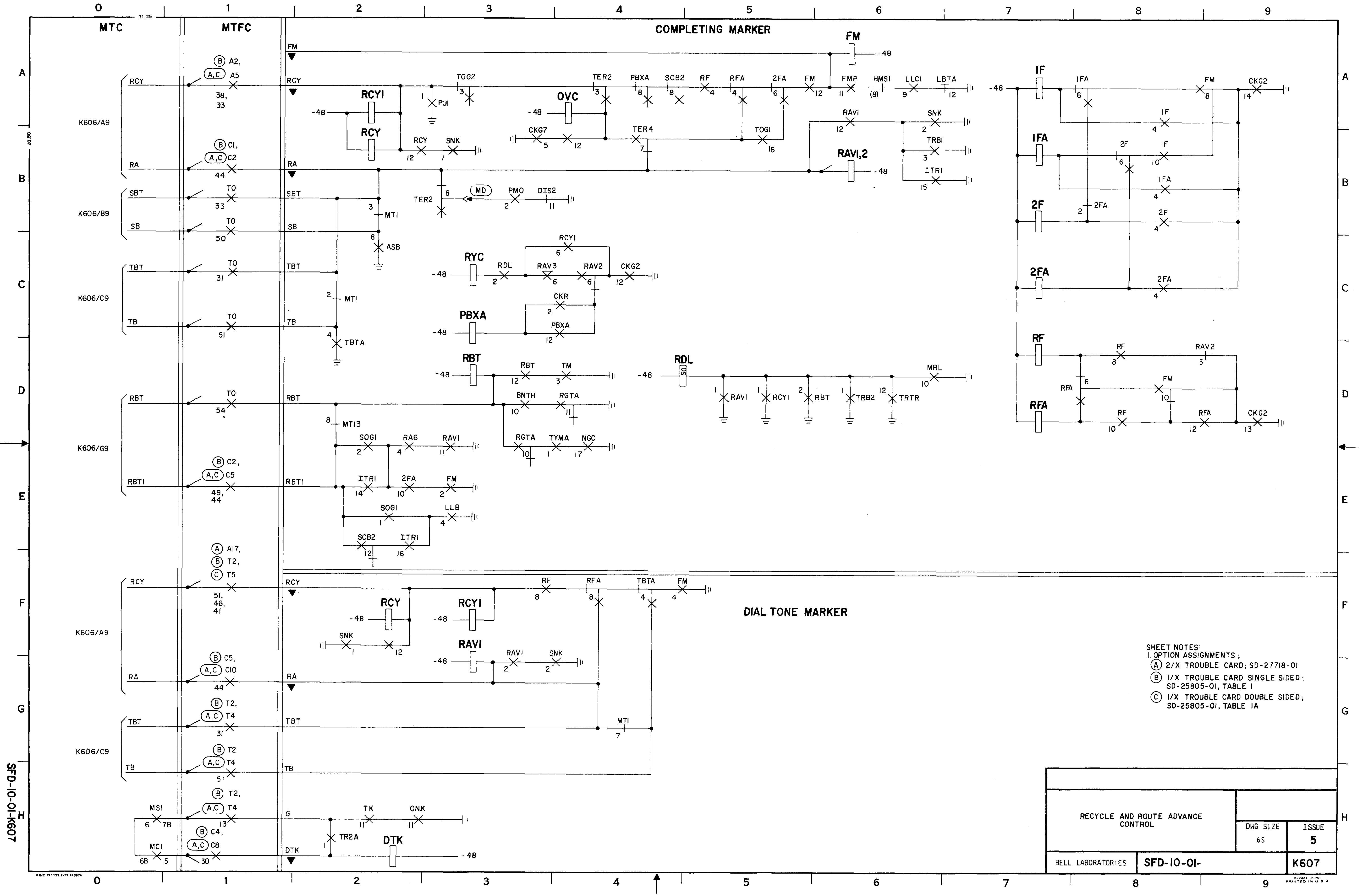
E-7481-L (4-73)

SFD-10-01-K606



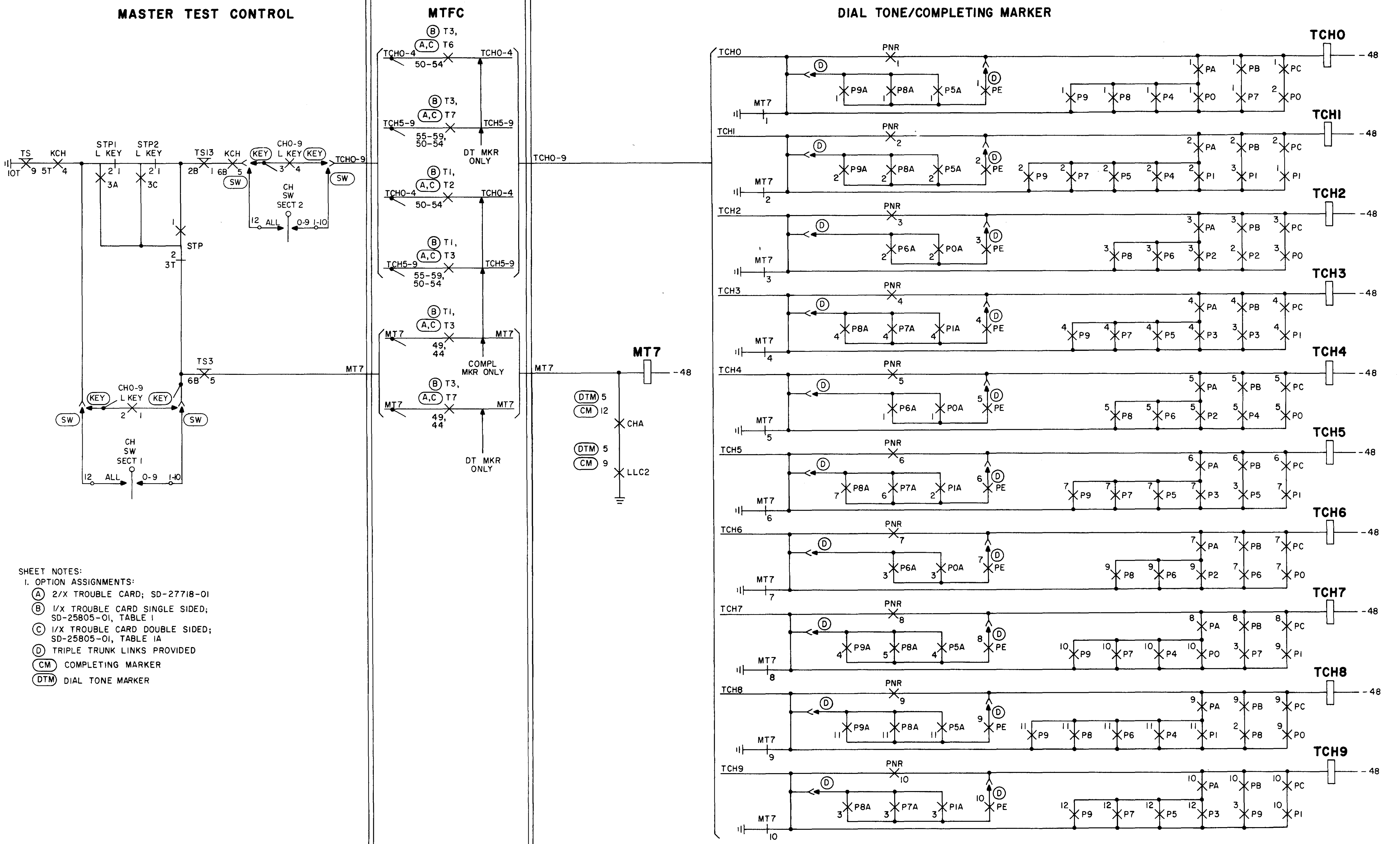
SHEET NOTES:
1. OPTION ASSIGNMENTS;
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

RECYCLE AND ROUTE ADVANCE CONTROL

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES
SFD-10-01-
K607

SFD-10-01-K607



SHEET NOTES:
1. OPTION ASSIGNMENTS:

- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
- Ⓓ TRIPLE TRUNK LINKS PROVIDED
- (CM) COMPLETING MARKER
- (DTM) DIAL TONE MARKER

ISSUE 5

SFD-10-01-K608

DIAL TONE/COMPLETING MARKER
CHANNEL TEST CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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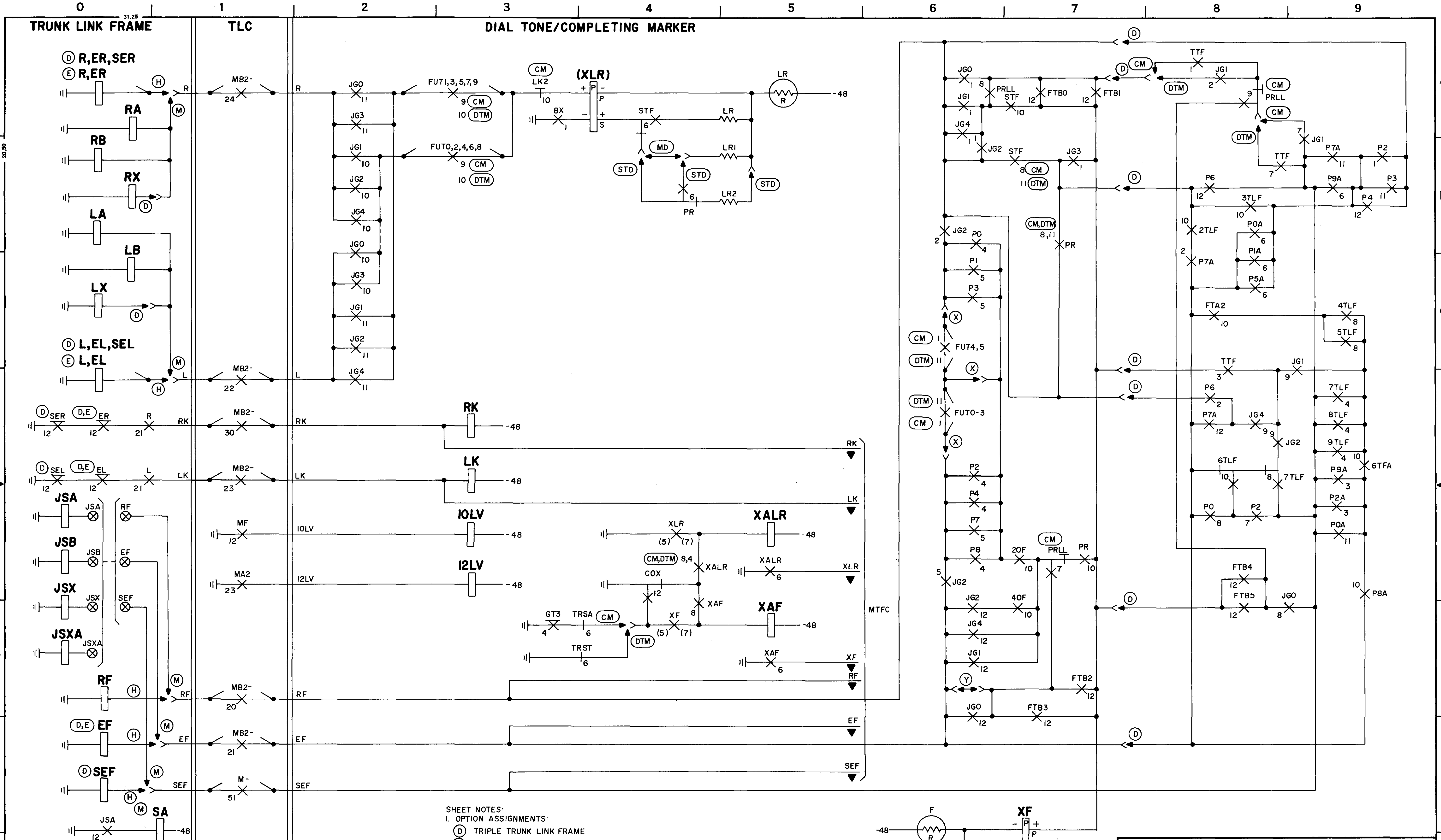
E-7481-L (4-71)

SFD-10-01-K608

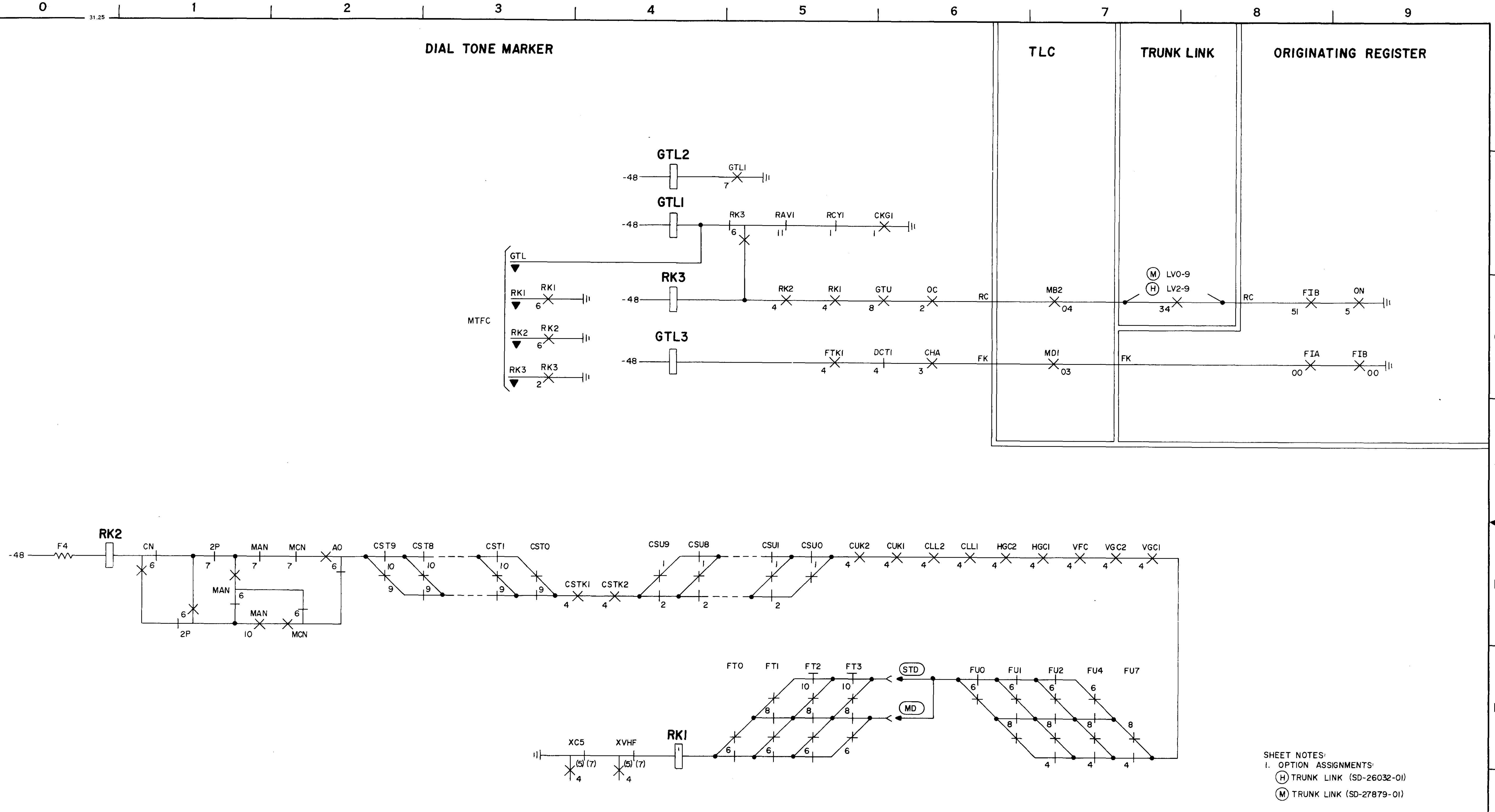


SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓓ TRIPLE TRUNK LINK FRAME
- Ⓔ PAIRED TRUNK LINK FRAME
- Ⓗ TRUNK LINK FRAME (SD-26032-01)
- Ⓜ TRUNK LINK FRAME (SD-27879-01)
- Ⓧ PERMANENT JUNCTOR DISTRIBUTION WITH LESS THAN 4 TRUNK LINK FRAMES
- Ⓨ 5 TRIPLE TRUNK LINK FRAMES ONLY

RIGHT OR LEFT, REGULAR, EXTENSION,
OR SECONDARY EXTENSION
TRUNK LINK FRAME

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K609



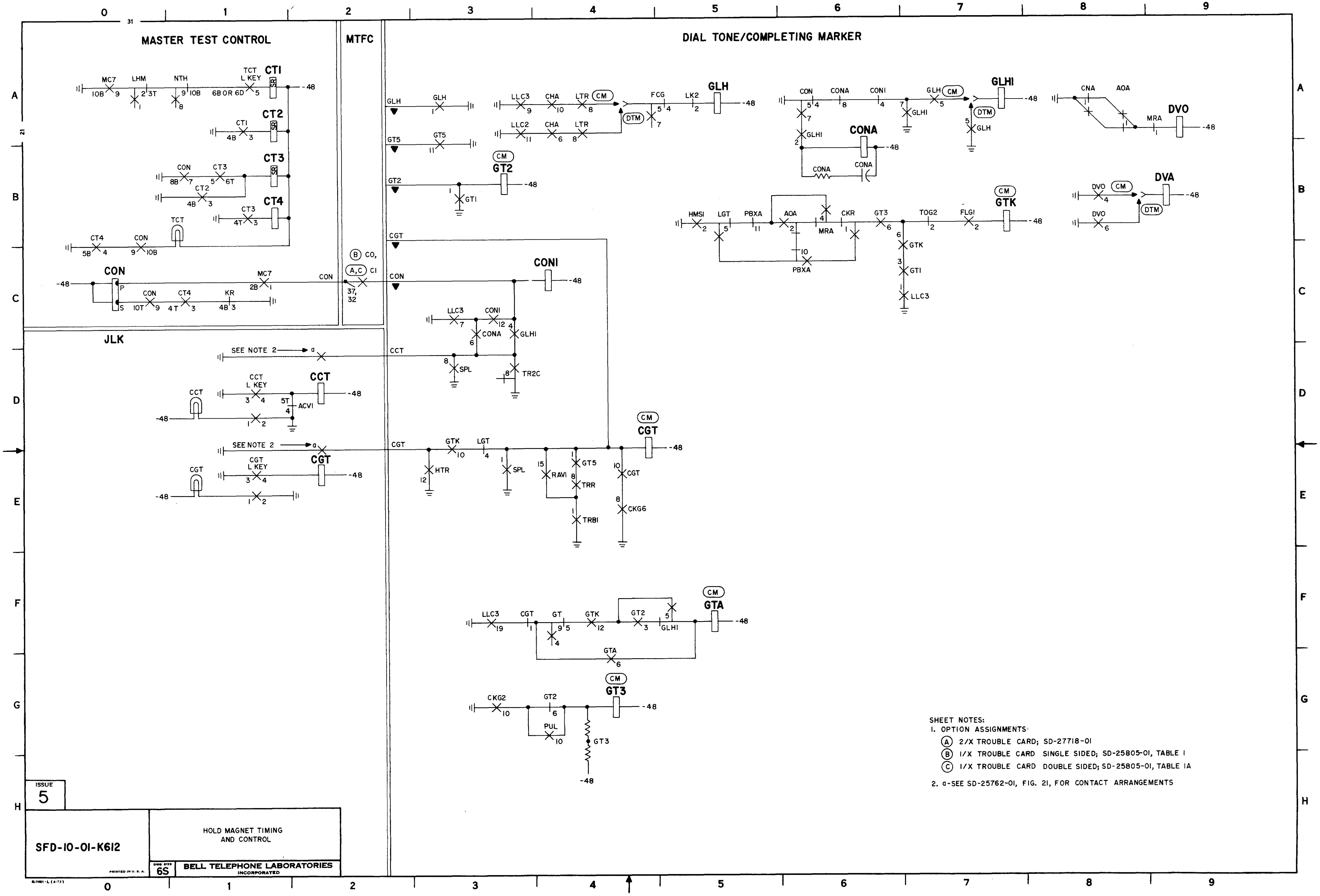
SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓗ TRUNK LINK (SD-26032-01)
Ⓜ TRUNK LINK (SD-27879-01)

CHECK OF REGISTER MEMORY CIRCUIT
(DT CLASS)

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K611

SFD-10-01-K611



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA
2. a-SEE SD-25762-01, FIG. 21, FOR CONTACT ARRANGEMENTS

ISSUE
5

SFD-10-01-K612

HOLD MAGNET TIMING
AND CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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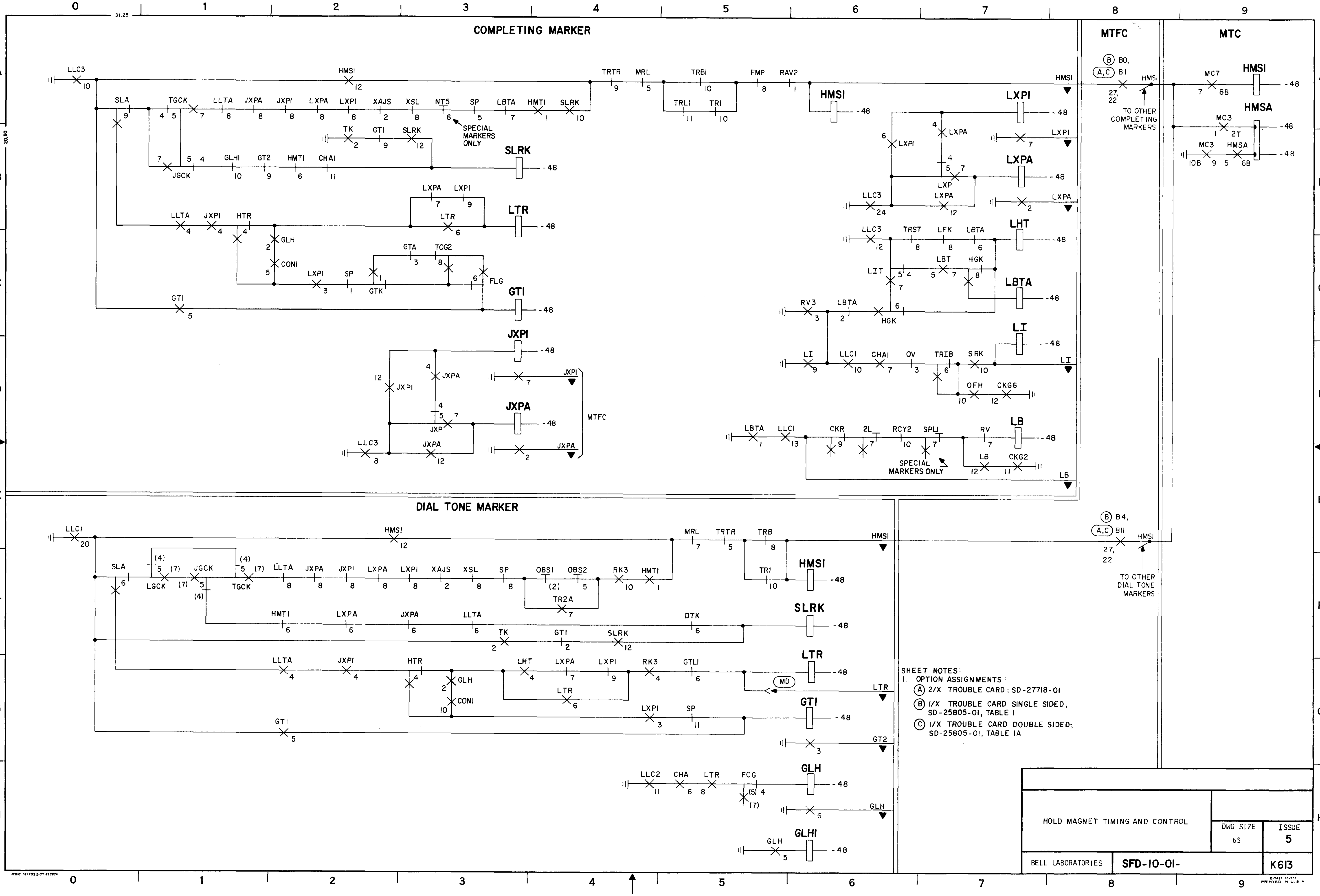
E-7481-L (4-72)

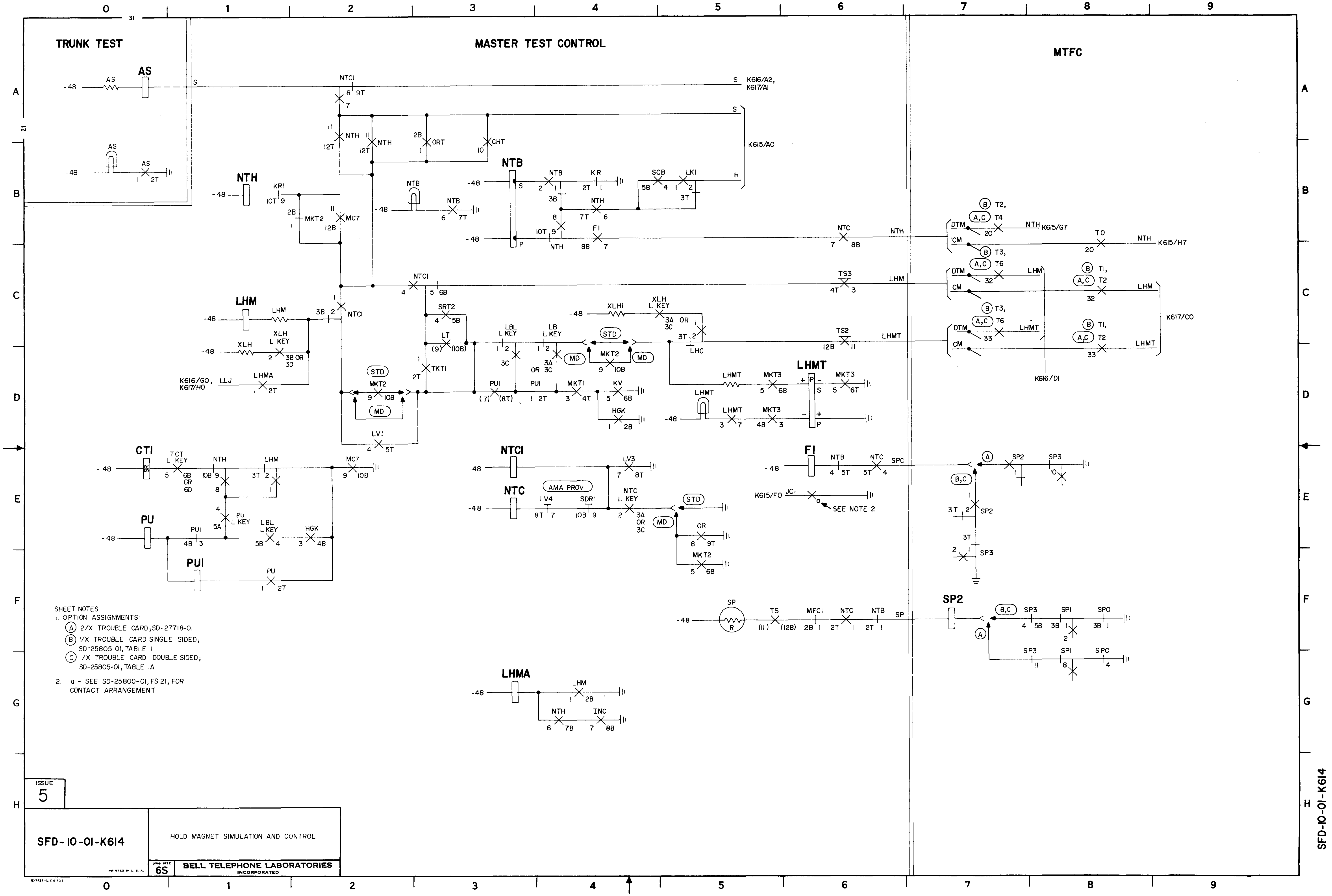
SFD-10-01-K612



SHEET NOTES:
1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

HOLD MAGNET TIMING AND CONTROL	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	K613

SFD-10-01-K613



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD, SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

2. a - SEE SD-25800-01, FS 21, FOR CONTACT ARRANGEMENT

ISSUE
5

SFD-10-01-K614

HOLD MAGNET SIMULATION AND CONTROL

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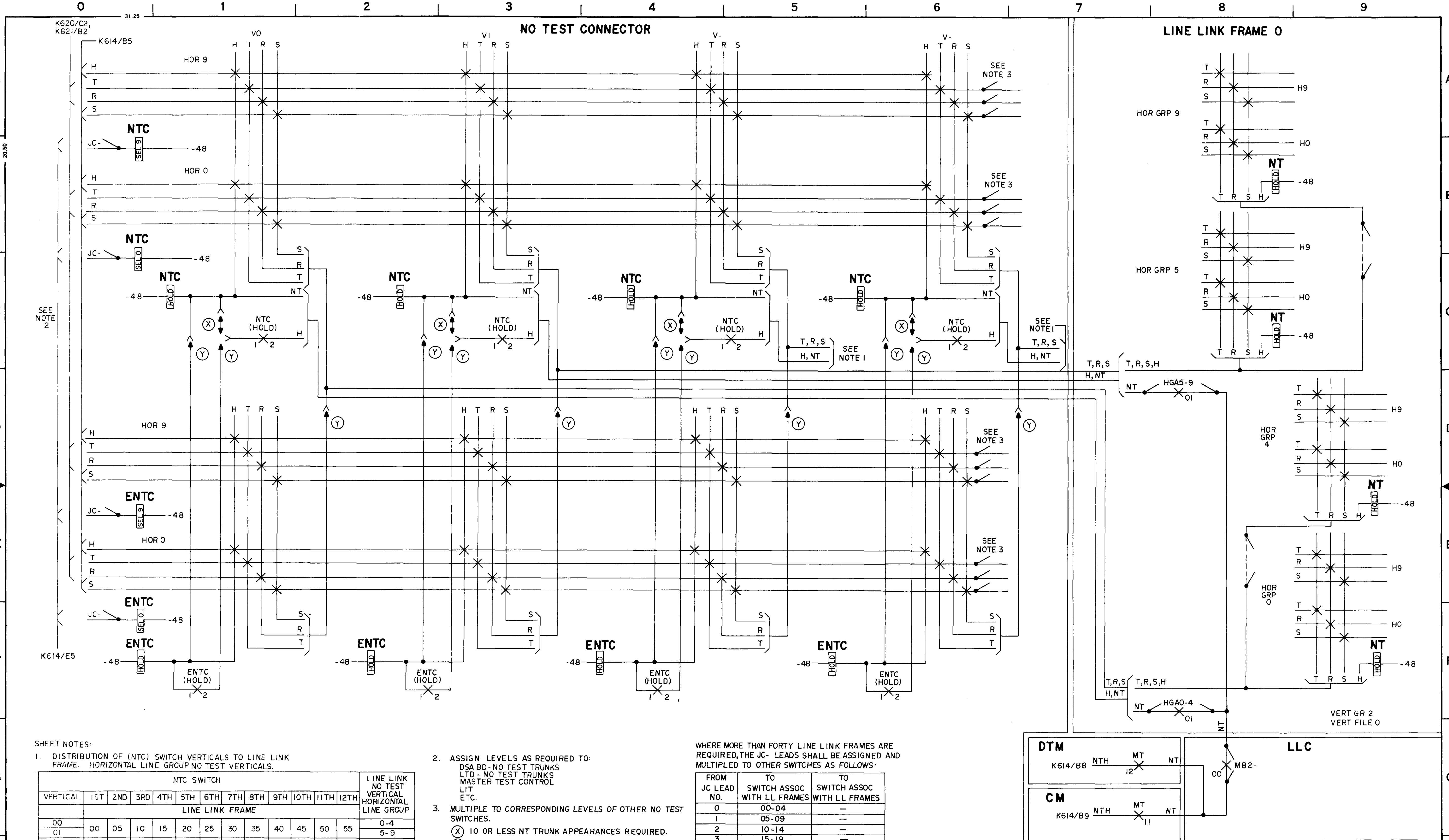
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-K614



SHEET NOTES:

1. DISTRIBUTION OF (NTC) SWITCH VERTICALS TO LINE LINK FRAME. HORIZONTAL LINE GROUP NO TEST VERTICALS.

	NTC SWITCH												LINE LINK NO TEST VERTICAL HORIZONTAL LINE GROUP
VERTICAL	1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	11TH	12TH	
	LINE LINK FRAME												
00	00	05	10	15	20	25	30	35	40	45	50	55	0-4
01													5-9
02	01	06	11	16	21	26	31	36	41	46	51	56	0-4
03													5-9
04	02	07	12	17	22	27	32	37	42	47	52	57	0-4
05													5-9
06	03	08	13	18	23	28	33	38	43	48	53	58	0-4
07													5-9
08	04	09	14	19	24	29	34	39	44	49	54	59	0-4
09													5-9

2. ASSIGN LEVELS AS REQUIRED TO:
   DSA BD-NO TEST TRUNKS
   LTD-NO TEST TRUNKS
   MASTER TEST CONTROL
   LIT
   ETC.

3. MULTIPLE TO CORRESPONDING LEVELS OF OTHER NO TEST SWITCHES.

Ⓧ 10 OR LESS NT TRUNK APPEARANCES REQUIRED.

Ⓨ MORE THAN 10 NT TRUNK APPEARANCES REQUIRED.

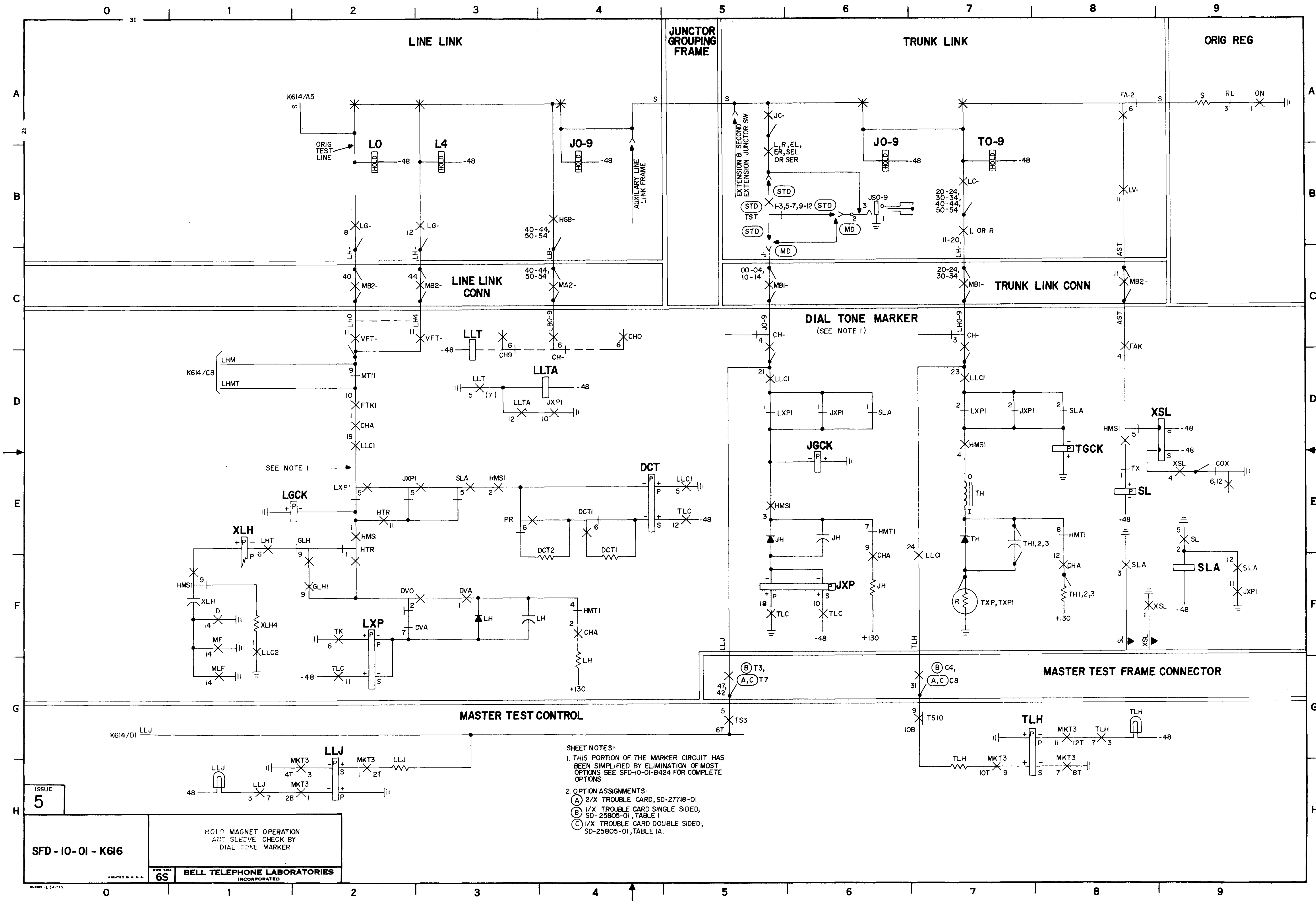
WHERE MORE THAN FORTY LINE LINK FRAMES ARE REQUIRED, THE JC- LEADS SHALL BE ASSIGNED AND MULTIPLED TO OTHER SWITCHES AS FOLLOWS:

FROM JC LEAD NO.	TO SWITCH ASSOC WITH LL FRAMES	TO SWITCH ASSOC WITH LL FRAMES
0	00-04	—
1	05-09	—
2	10-14	—
3	15-19	—
4	20-24	40-44
5	25-29	45-49
6	30-34	50-54
7	35-39	55-59

NO TEST CONNECTOR

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K615



SHEET NOTES:

1. THIS PORTION OF THE MARKER CIRCUIT HAS BEEN SIMPLIFIED BY ELIMINATION OF MOST OPTIONS SEE SFD-10-01-B424 FOR COMPLETE OPTIONS.

2. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
- Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.

ISSUE
5

SFD-10-01-K616

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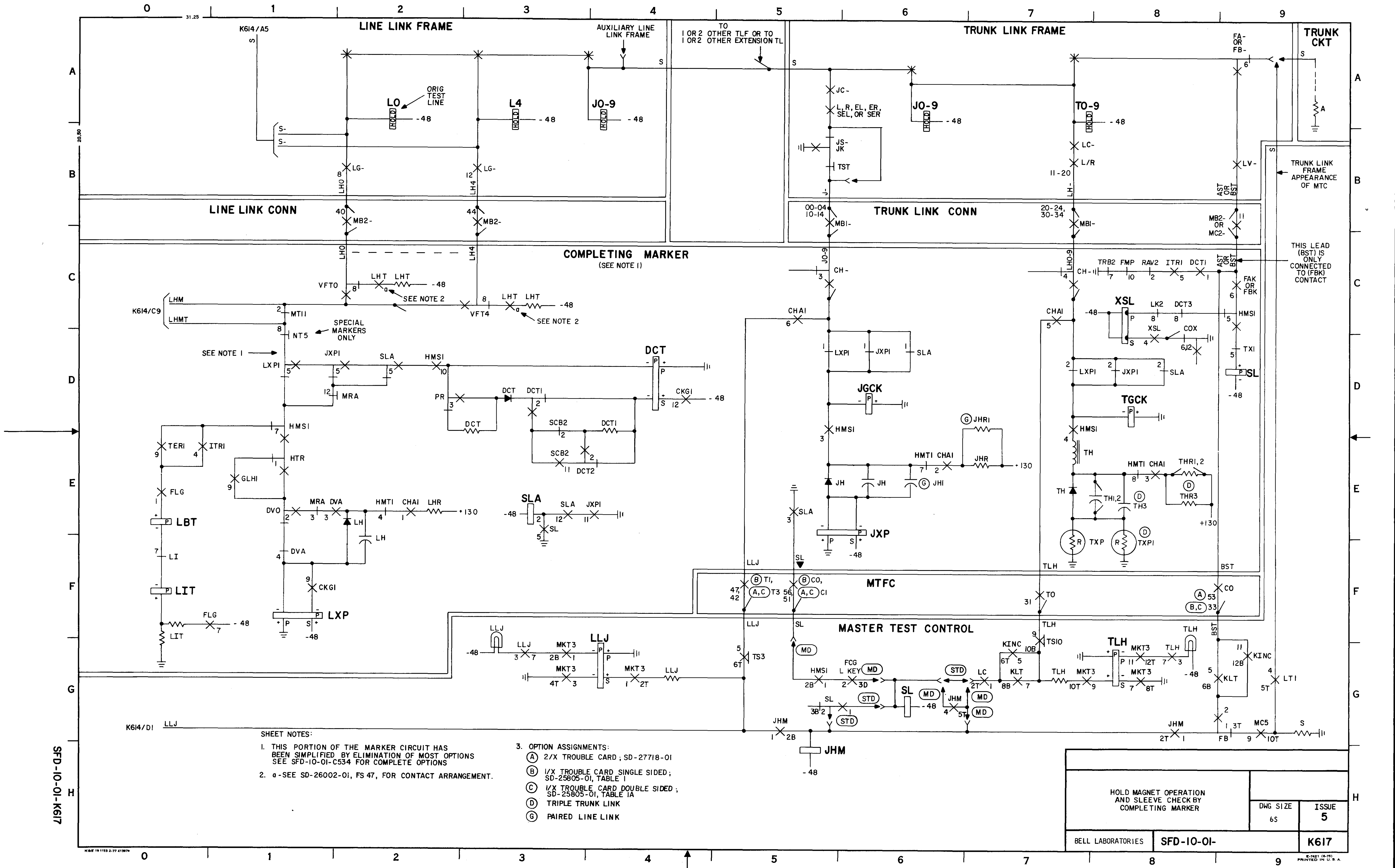
HOLD MAGNET OPERATION
AND SLEEVE CHECK BY
DIAL TONE MARKER

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-73)

SFD-10-01-K616



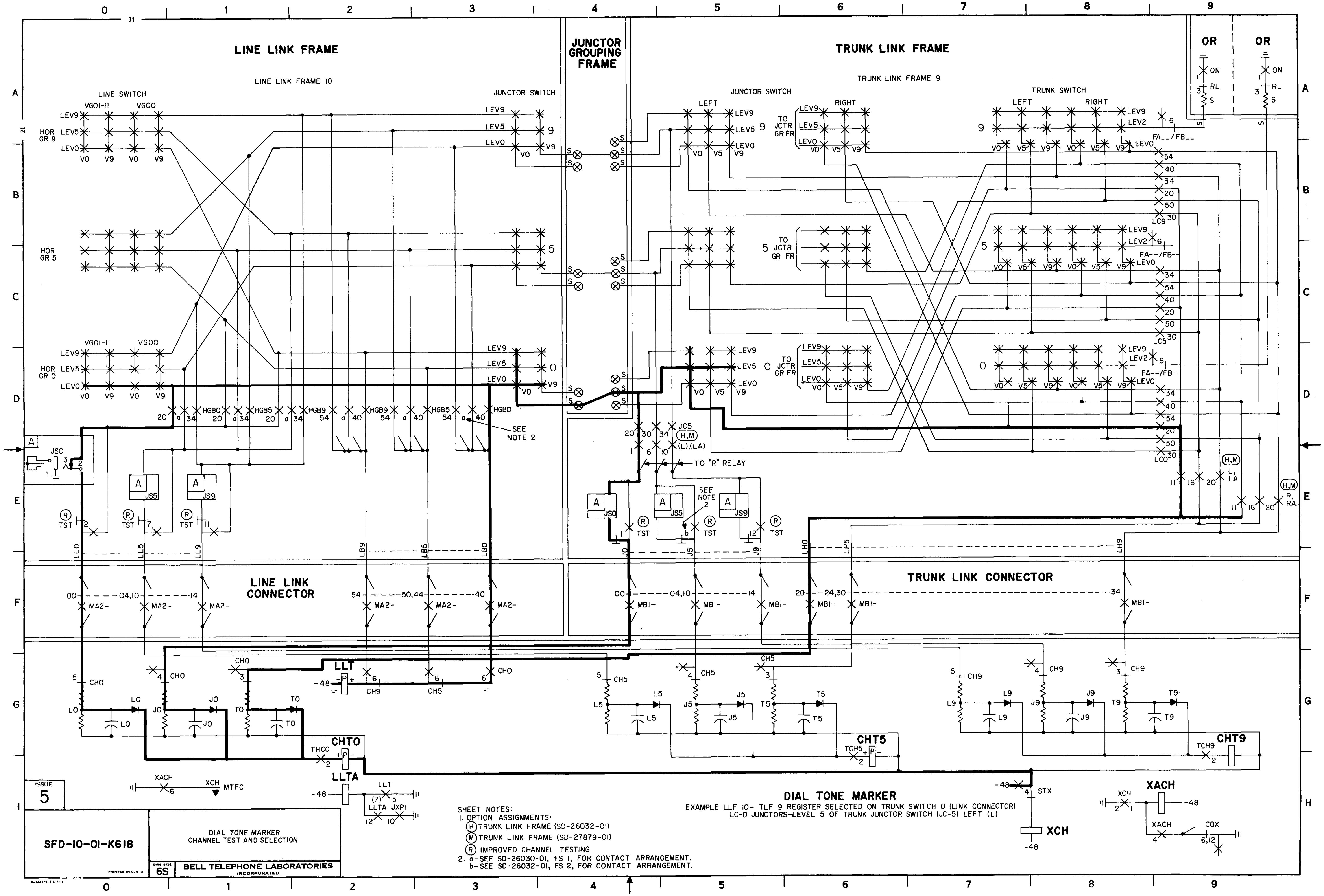
SHEET NOTES:

1. THIS PORTION OF THE MARKER CIRCUIT HAS BEEN SIMPLIFIED BY ELIMINATION OF MOST OPTIONS SEE SFD-10-01-C534 FOR COMPLETE OPTIONS
2. a-SEE SD-26002-01, FS 47, FOR CONTACT ARRANGEMENT.
3. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
   - Ⓓ TRIPLE TRUNK LINK
   - Ⓖ PAIRED LINE LINK

HOLD MAGNET OPERATION AND SLEEVE CHECK BY COMPLETING MARKER

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K617



DIAL TONE MARKER

EXAMPLE LLF 10- TLF 9 REGISTER SELECTED ON TRUNK SWITCH 0 (LINK CONNECTOR)
LC-0 JUNCTORS-LEVEL 5 OF TRUNK JUNCTOR SWITCH (JC-5) LEFT (L)

SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓗ TRUNK LINK FRAME (SD-26032-01)
Ⓜ TRUNK LINK FRAME (SD-27879-01)
Ⓡ IMPROVED CHANNEL TESTING
2. a-SEE SD-26030-01, FS 1, FOR CONTACT ARRANGEMENT.
b-SEE SD-26032-01, FS 2, FOR CONTACT ARRANGEMENT.

ISSUE
5

SFD-10-01-K618

DIAL TONE MARKER
CHANNEL TEST AND SELECTION

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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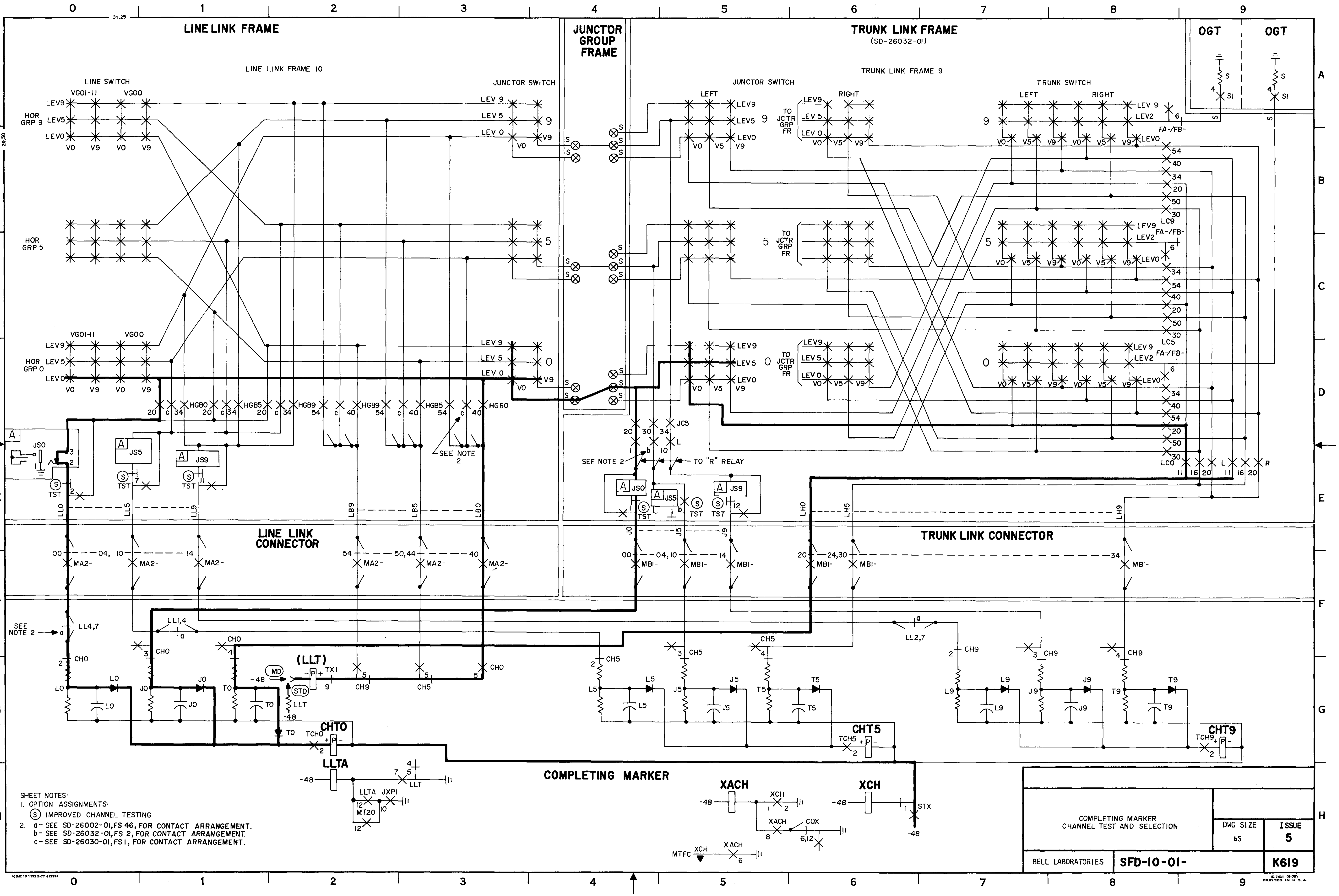
E-7481-L (4-73)

SFD-10-01-K618
2 SHEETS, SHEET 1



SHEET NOTES:

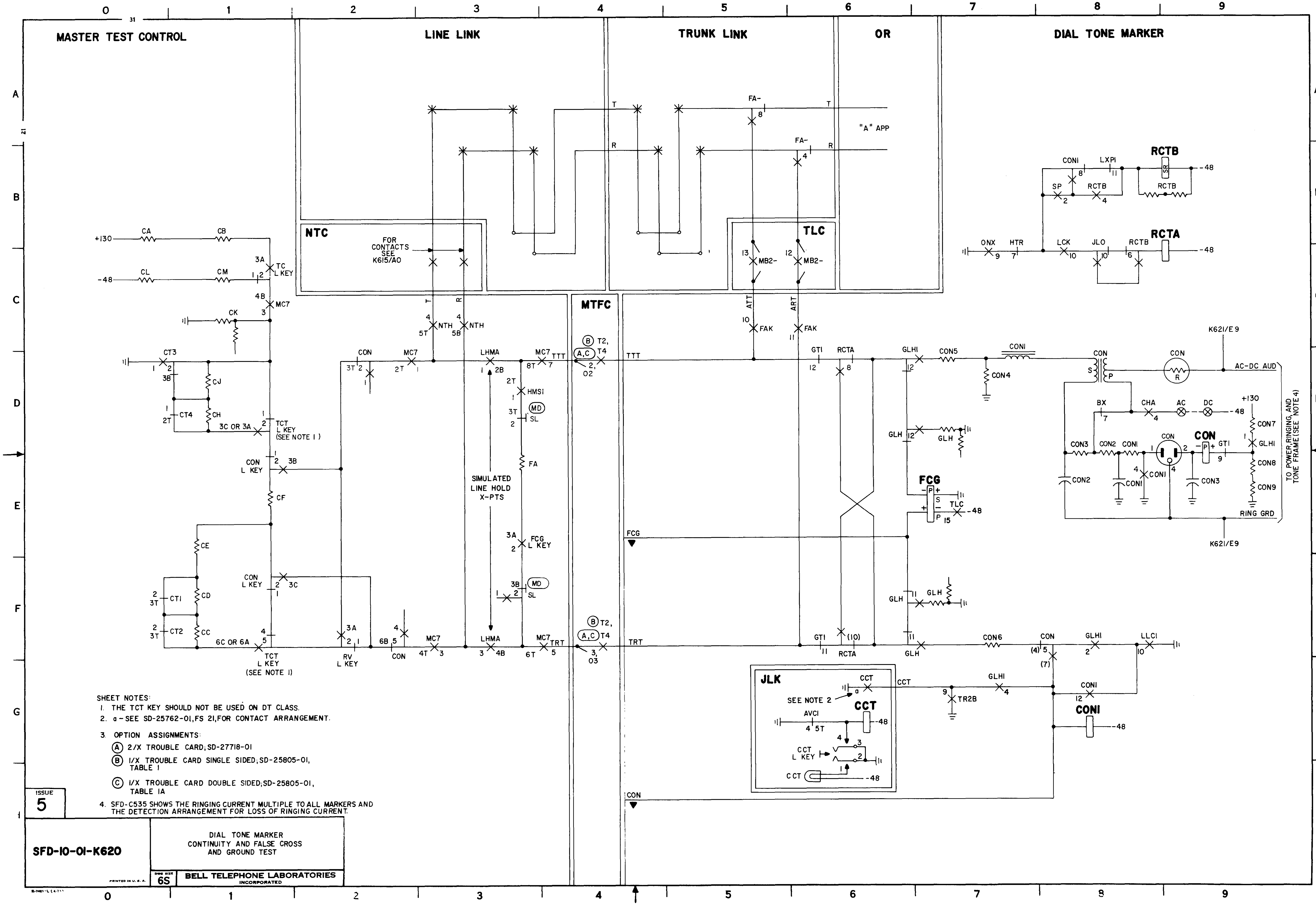
1. OPTION ASSIGNMENTS:
   Ⓢ IMPROVED CHANNEL TESTING
2. a- SEE SD-26002-01, FS 46, FOR CONTACT ARRANGEMENT.
   b- SEE SD-26032-01, FS 2, FOR CONTACT ARRANGEMENT.
   c- SEE SD-26030-01, FS 1, FOR CONTACT ARRANGEMENT.

COMPLETING MARKER
CHANNEL TEST AND SELECTION

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K619

SFD-10-01-K619
2 SHEETS, SHEET 1



SHEET NOTES:

1. THE TCT KEY SHOULD NOT BE USED ON DT CLASS.
2. a - SEE SD-25762-01, FS 21, FOR CONTACT ARRANGEMENT.
3. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
4. SFD-C535 SHOWS THE RINGING CURRENT MULTIPLE TO ALL MARKERS AND THE DETECTION ARRANGEMENT FOR LOSS OF RINGING CURRENT.

ISSUE
5

SFD-10-01-K620

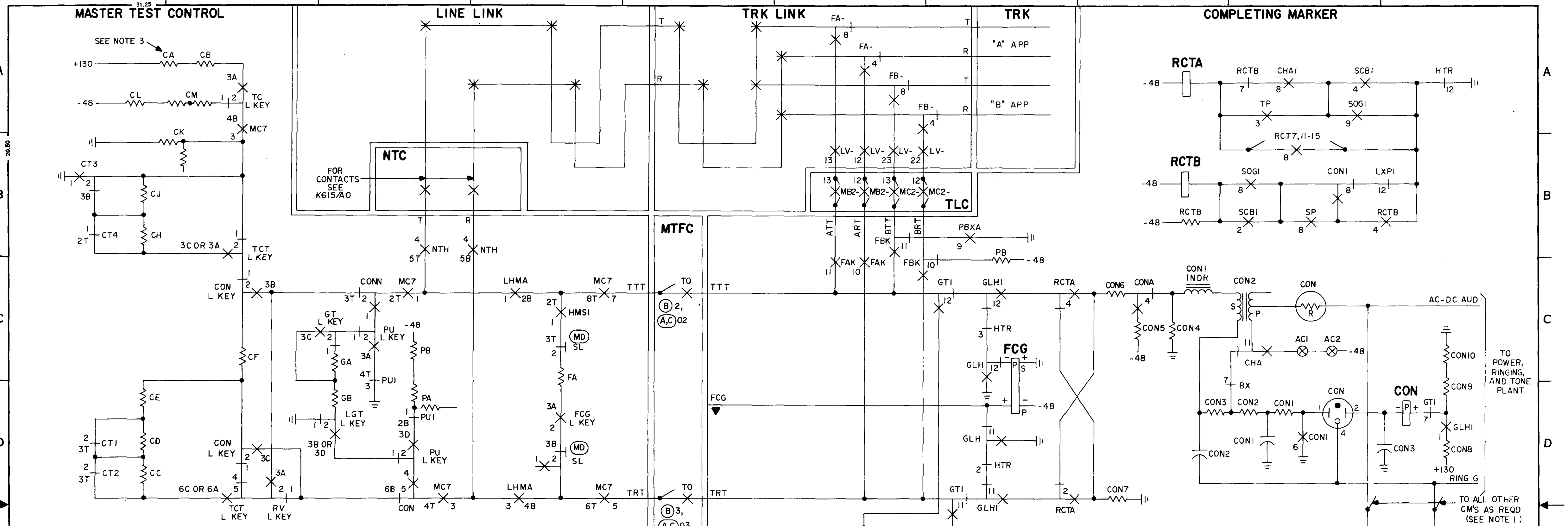
DIAL TONE MARKER
CONTINUITY AND FALSE CROSS
AND GROUND TEST

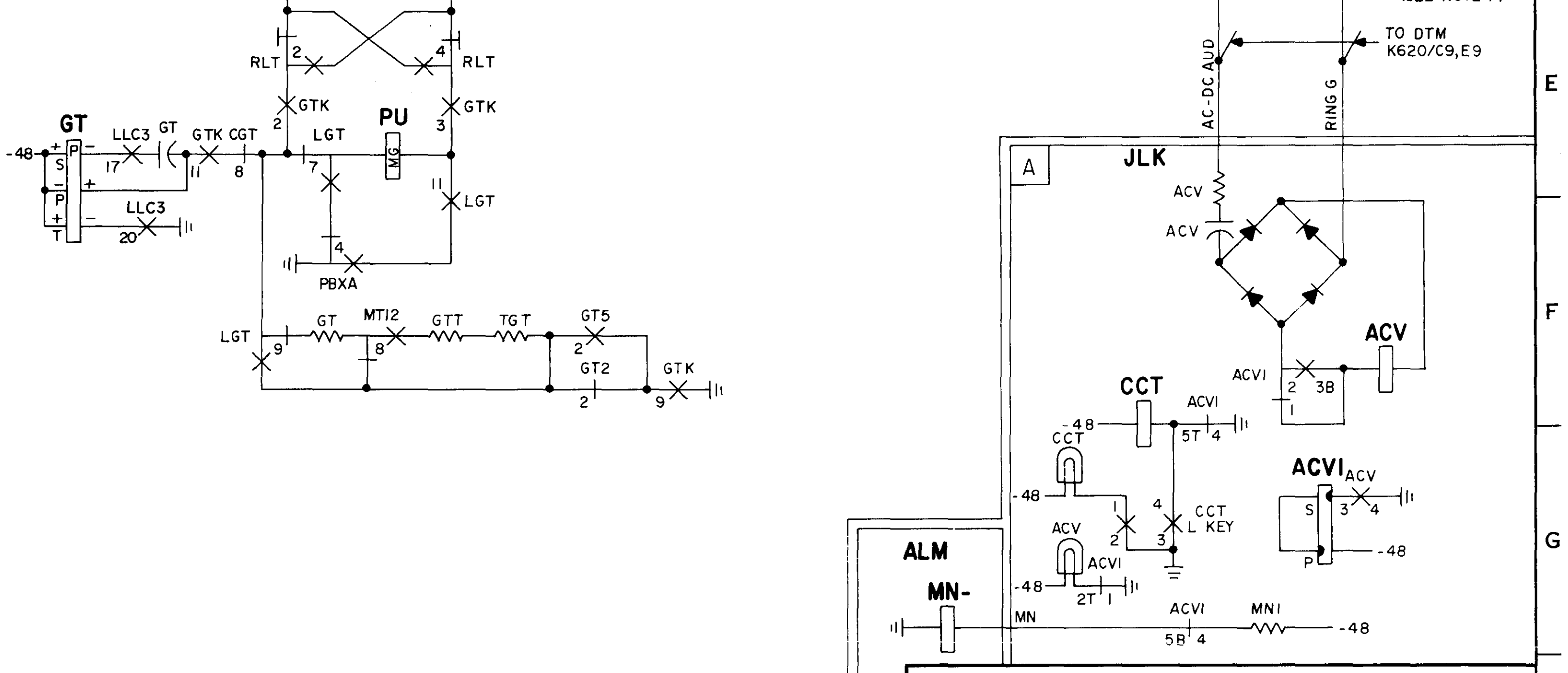
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

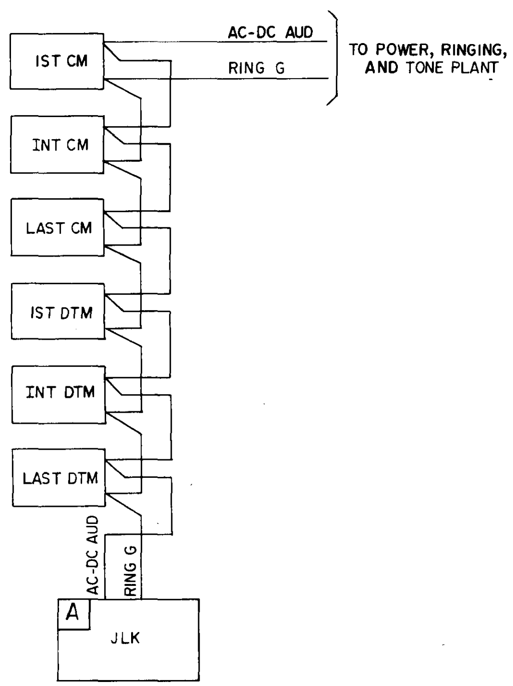
SFD-10-01-K620





SHEET NOTES:

1. MULTIPLE ARRANGEMENT FOR RINGING CURRENT DETECTION (LESS THAN 12 MARKERS PROVIDED)



2. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

3.

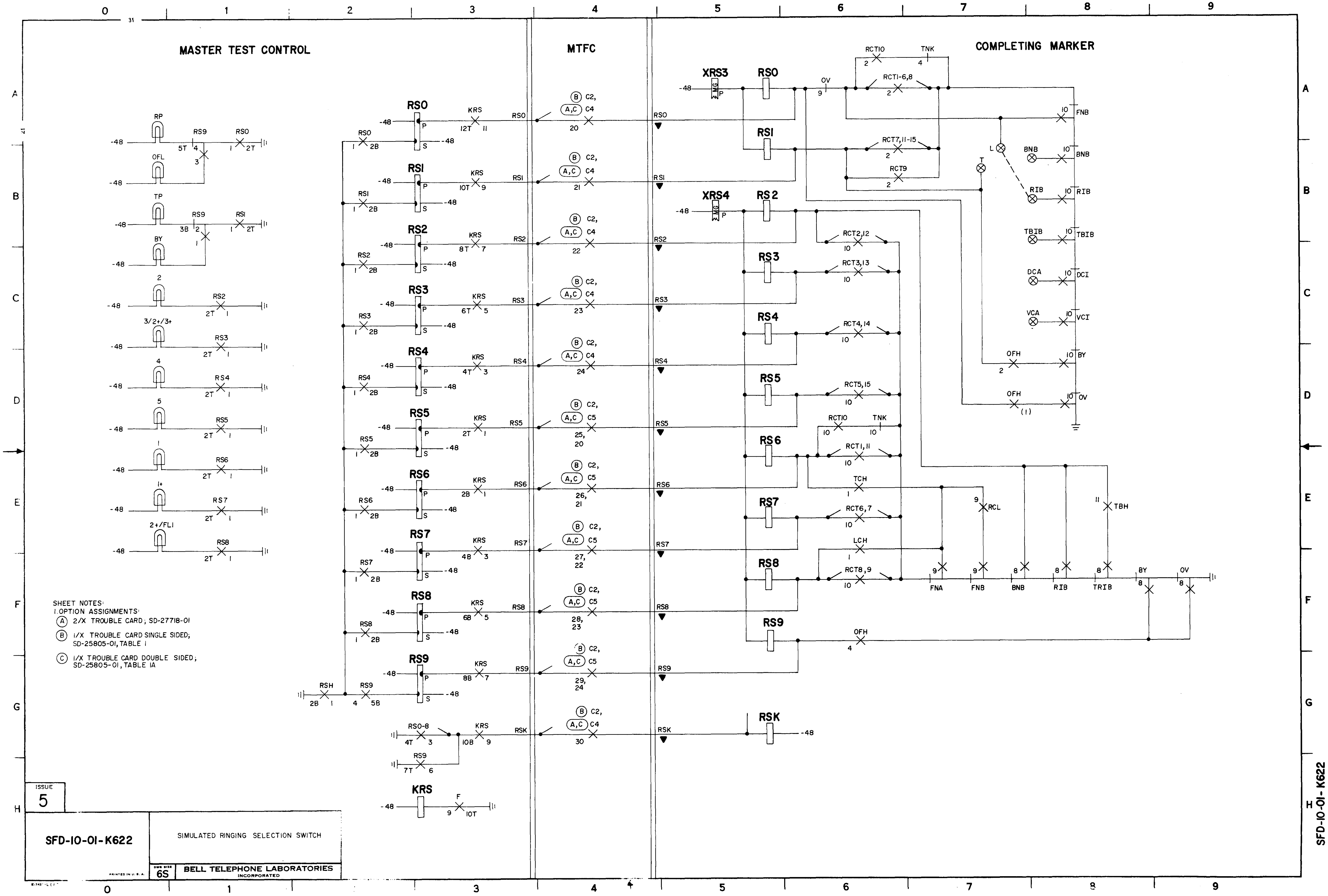
RESISTOR	VALUE	
CA	10kΩ	
CB	1900	
CC	10kΩ	
CD	30kΩ	
CE	40kΩ	
CH	11kΩ	
CJ	22kΩ	
CK		456
CL	32kΩ	
CM	385	427

COMPLETING MARKER
CONTINUITY AND FALSE
CROSS AND GROUND TESTS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K621

SFD-10-01-K621



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-K622

SIMULATED RINGING SELECTION SWITCH

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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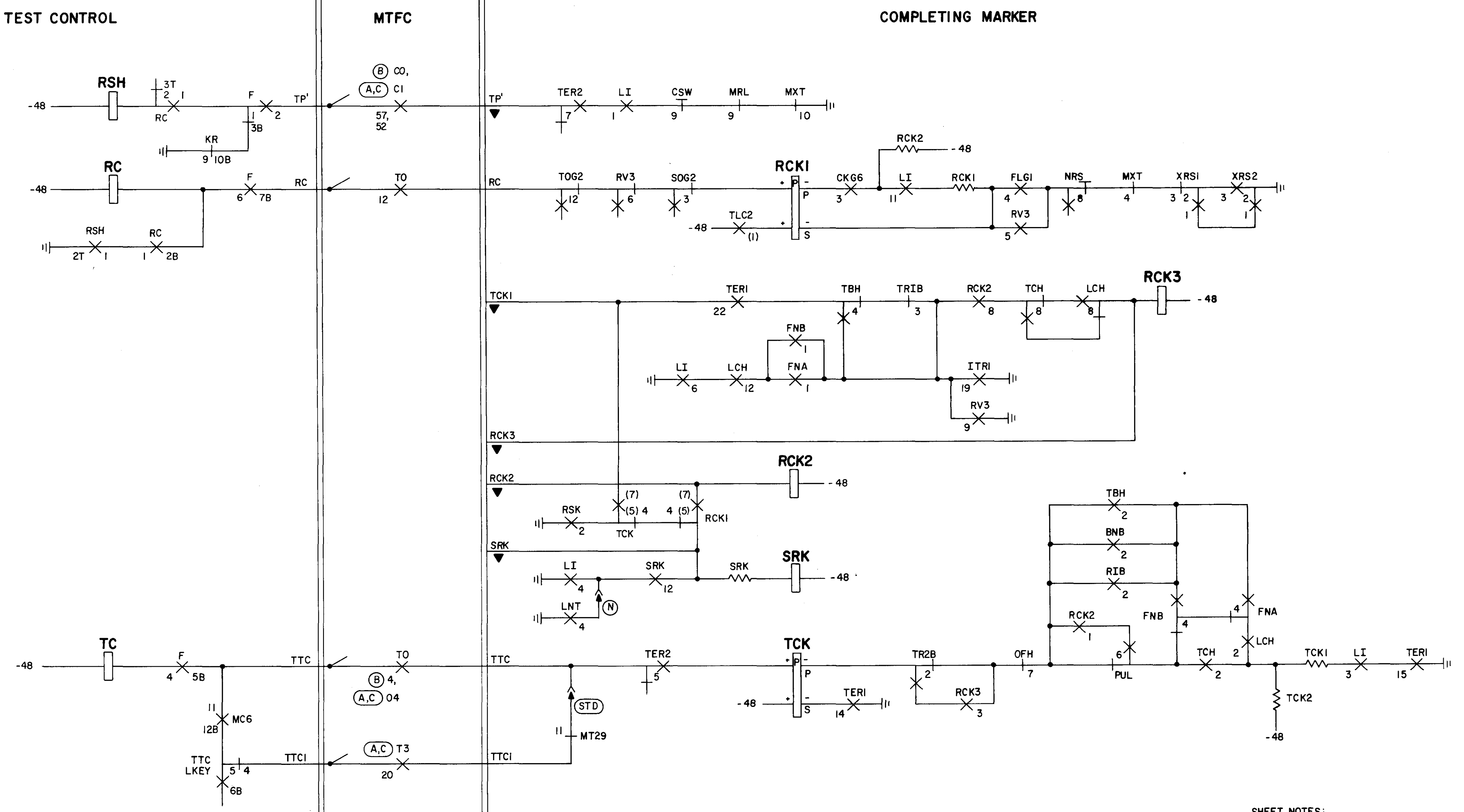
SFD-10-01-K622



SHEET NOTES:
1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

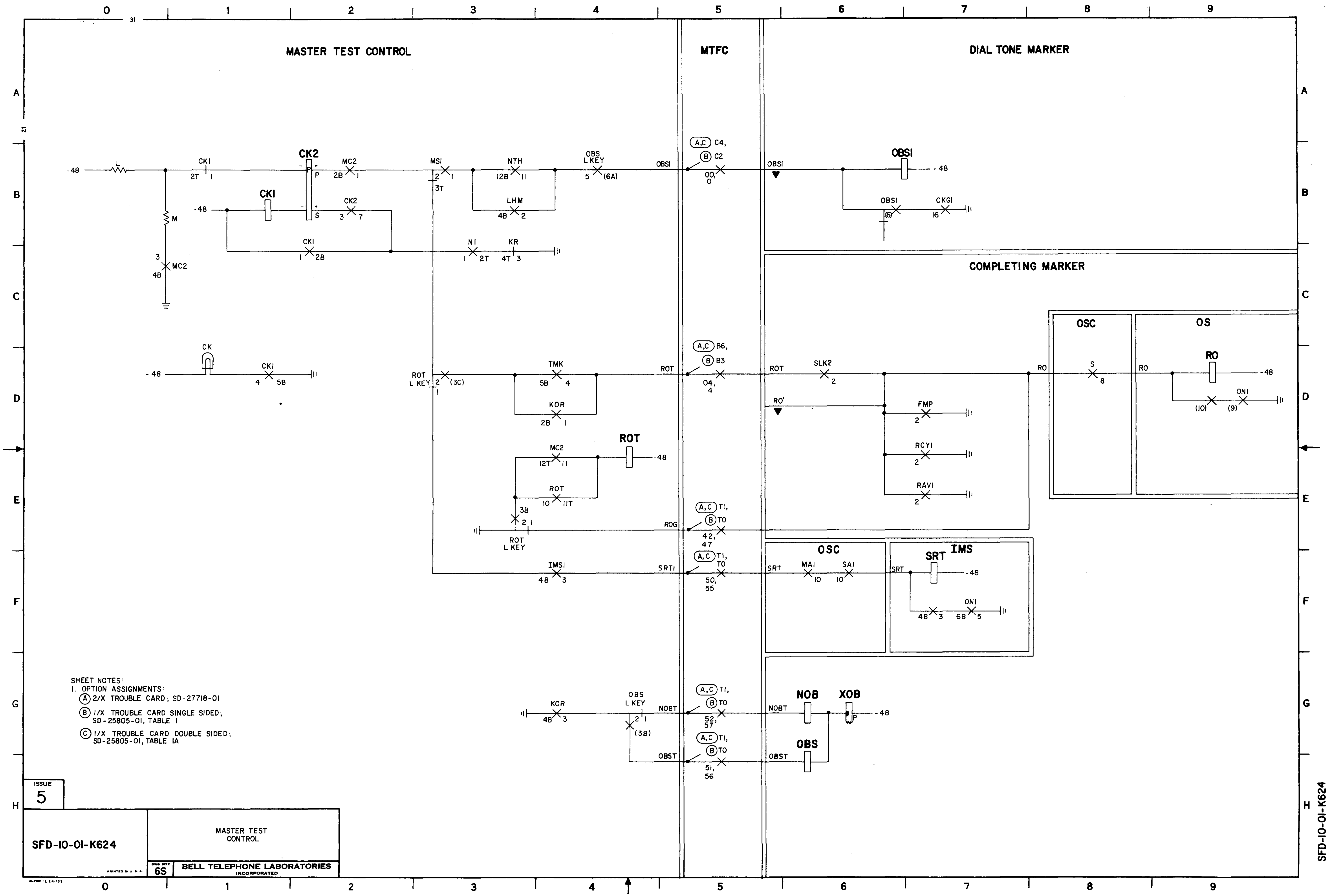
Ⓝ SPECIAL MARKERS

TRUNK CHARGING
(INC) CLASS

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES
SFD-10-01-
K623

SFD-10-01-K623



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

ISSUE
5

SFD-10-01-K624

MASTER TEST CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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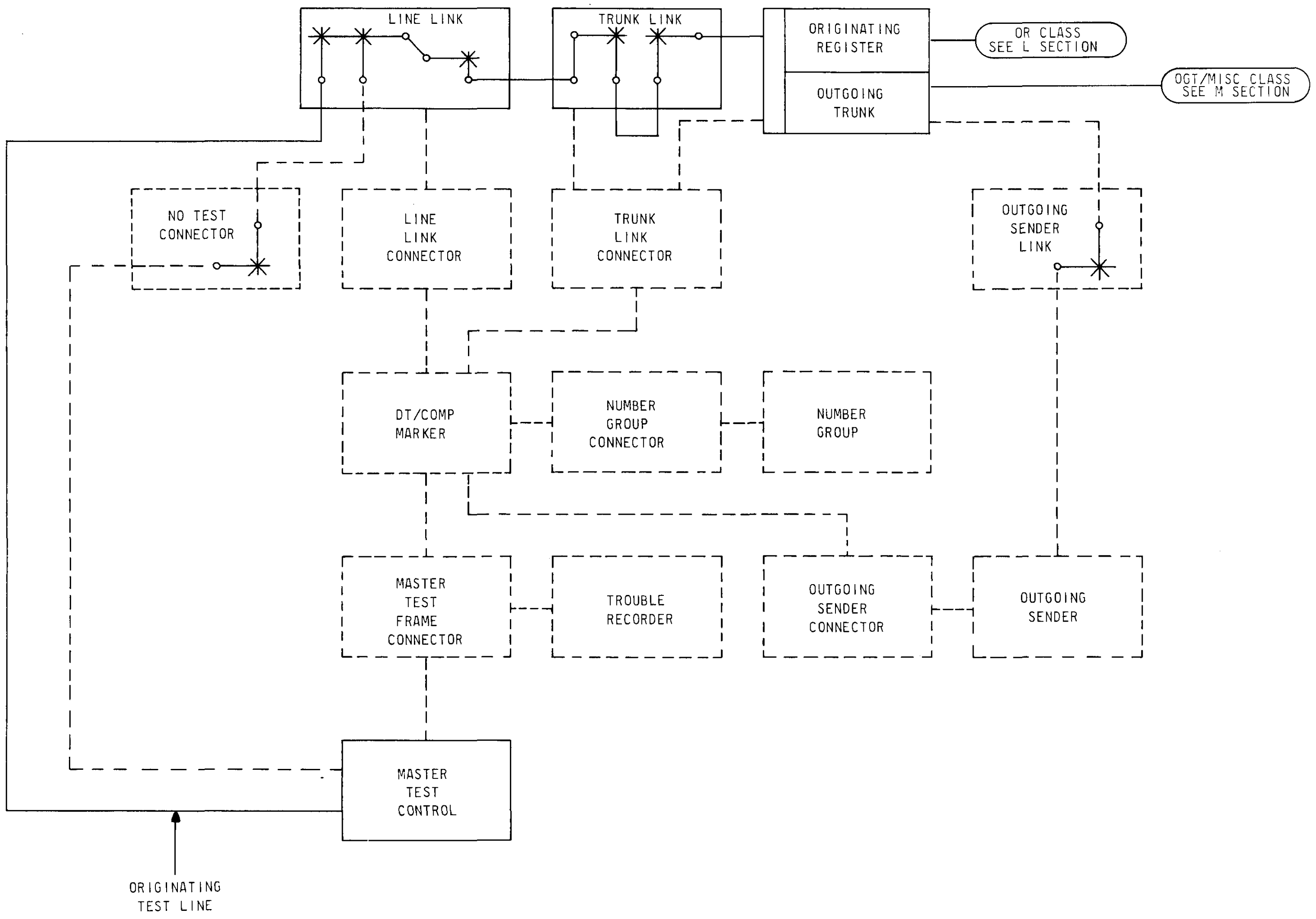
E-7481-L (4-73)

SFD-10-01-K624



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K702	SEQUENCE CHART - SEIZURE OF TROUBLE RECORDER
K703	SEQUENCE CHART - MARKER DISCONNECT - (DT CLASS)
K704	SEQUENCE CHART - MARKER DISCONNECT (ORIG CLASS)
K705	SEQUENCE CHART - MARKER DISCONNECT (INC CLASS)
K706	SEQUENCE CHART - TEST FRAME RESTORED TO NORMAL
K707	TROUBLE RECORD CONTROL
K708	DISCONNECT CONTROL (DT CLASS)
K709	RESERVED
K710	DISCONNECT CONTROL (ORIG/INC CLASS)
K711	DISCONNECT CONTROL (ORIG/INC CLASS)
K712	TIMING CONTROL (DT CLASS)
K713	TIMING CONTROL (ORIG/INC CLASS)

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART K7
MARKER DISCONNECT-TEST FRAME
RESTORED TO NORMAL

SFD-10-01-K701

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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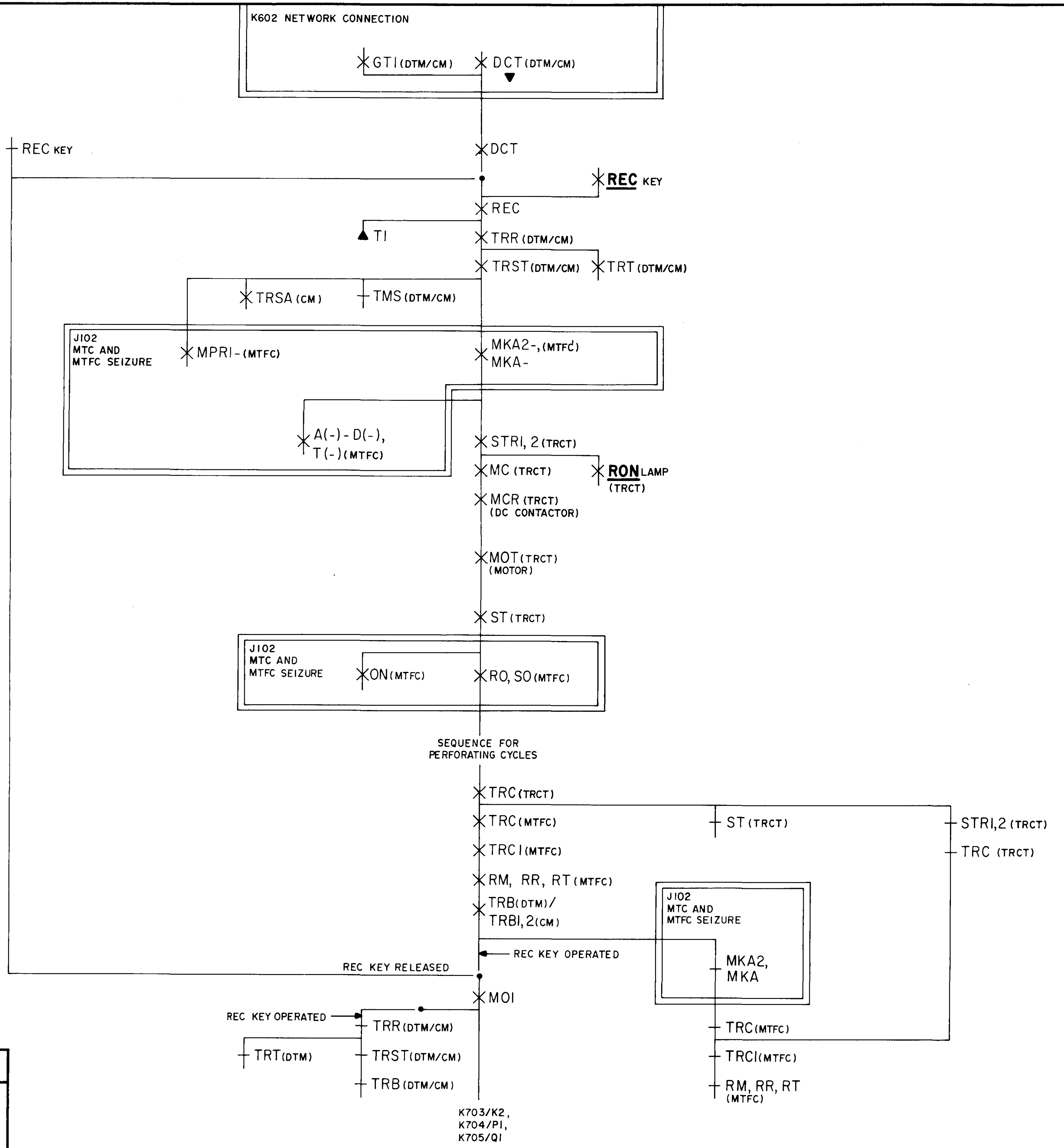
SFD-10-01-K701
2 SHEETS, SHEET 1

E-7421 (10-71)



ISSUE 5
DWG SIZE 6S

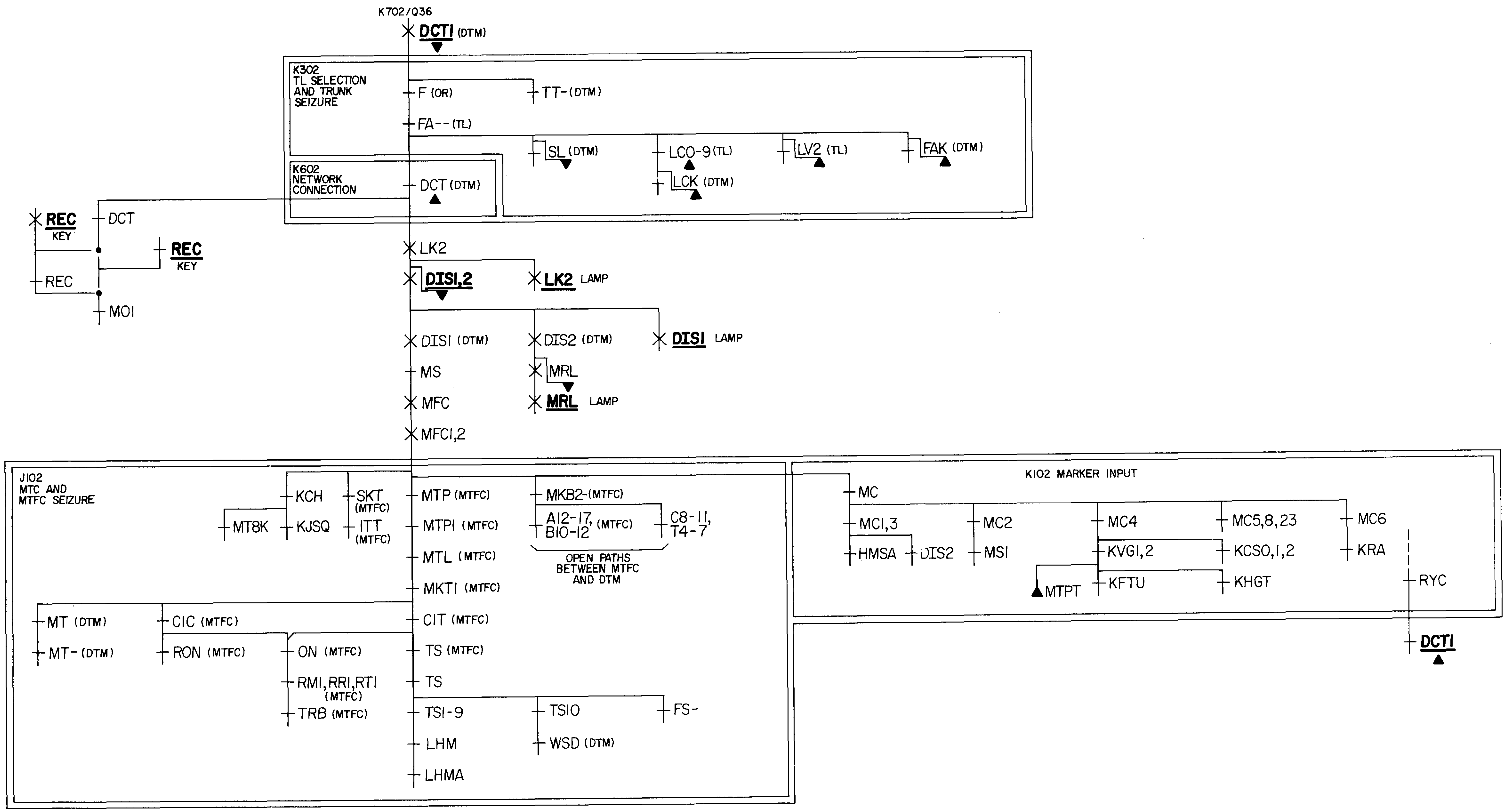
SEQUENCE CHART
SEIZURE OF TROUBLE
RECORDER

SFD-10-01- K702 BELL LABORATORIES

G 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.

SFD-10-01-K702



SEQUENCE CHART
MARKER DISCONNECT
(DT CLASS)

DWG SIZE 6S

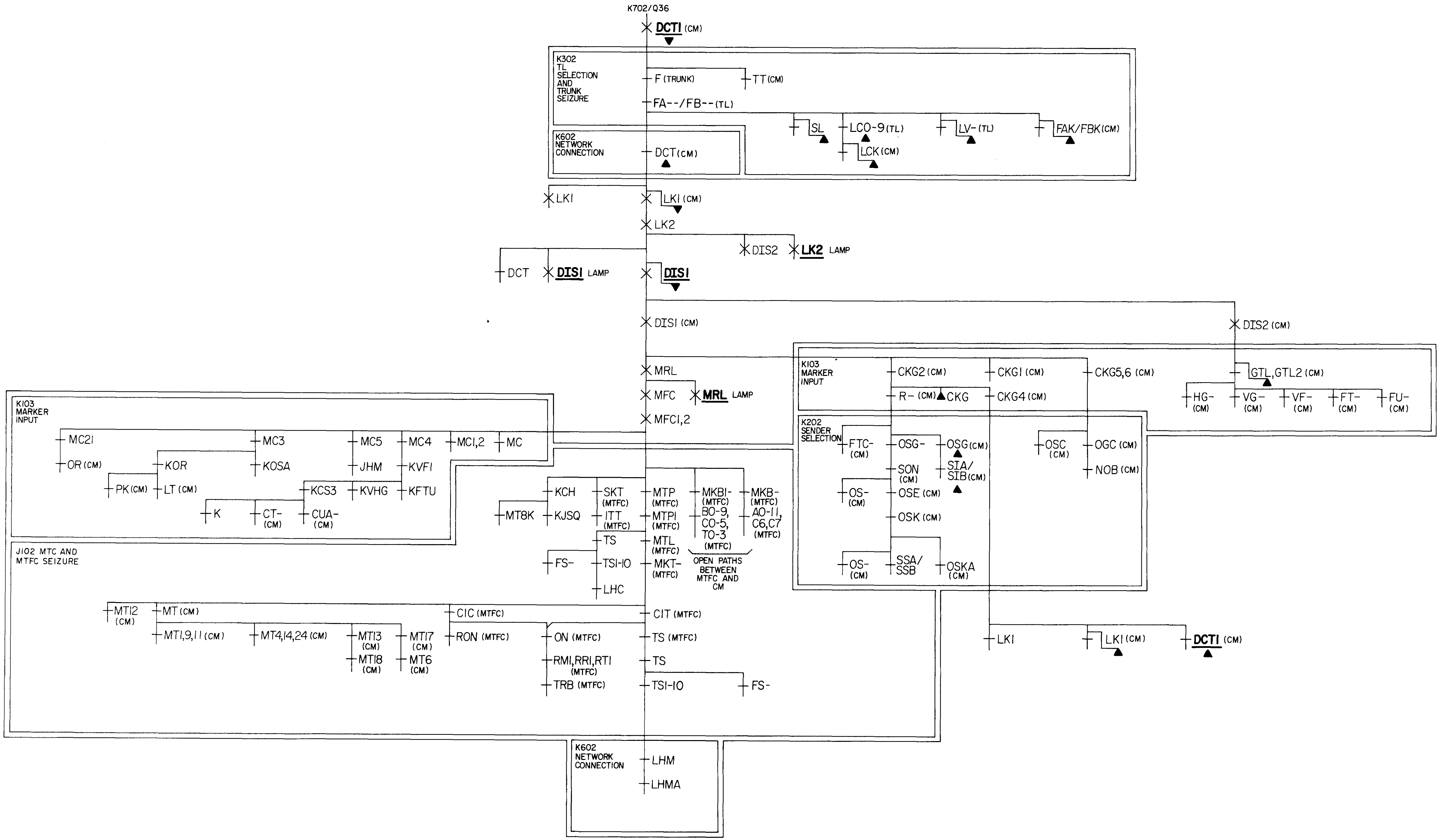
ISSUE 5

BELL LABORATORIES SFD-10-01- K703

SFD-10-01-K703

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



ISSUE	DWG SIZE	SEQUENCE CHART MARKER DISCONNECT (ORIG CLASS)
5	6S	

SFD-10-01- K704 BELL LABORATORIES

SFD-10-01-K704

INING 44-131 28142

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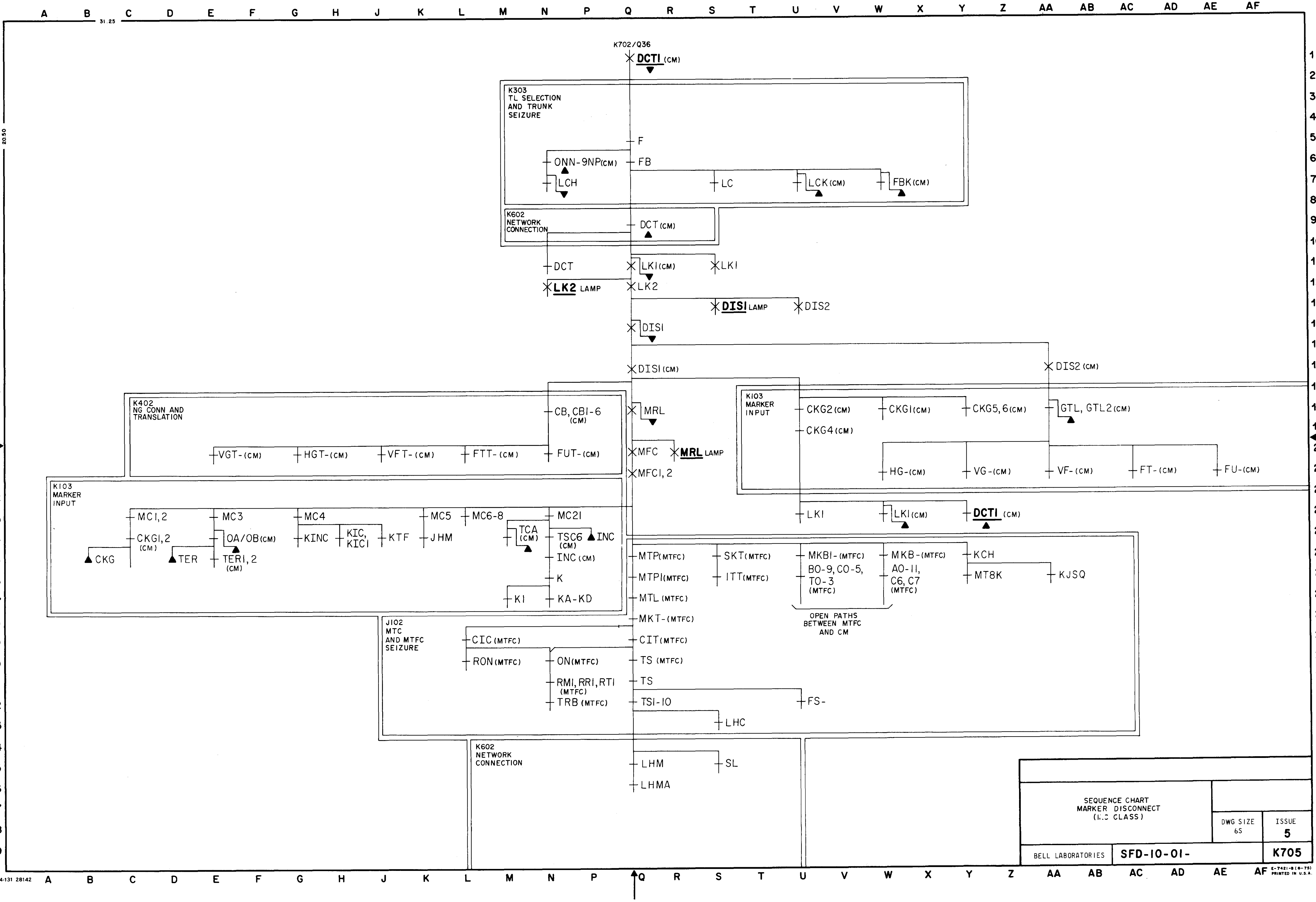

SEQUENCE CHART
MARKER DISCONNECT
(NC CLASS)

DWG SIZE 6S

ISSUE 5

BELL LABORATORIES

SFD-10-01- K705

E-7421-B (6-75)
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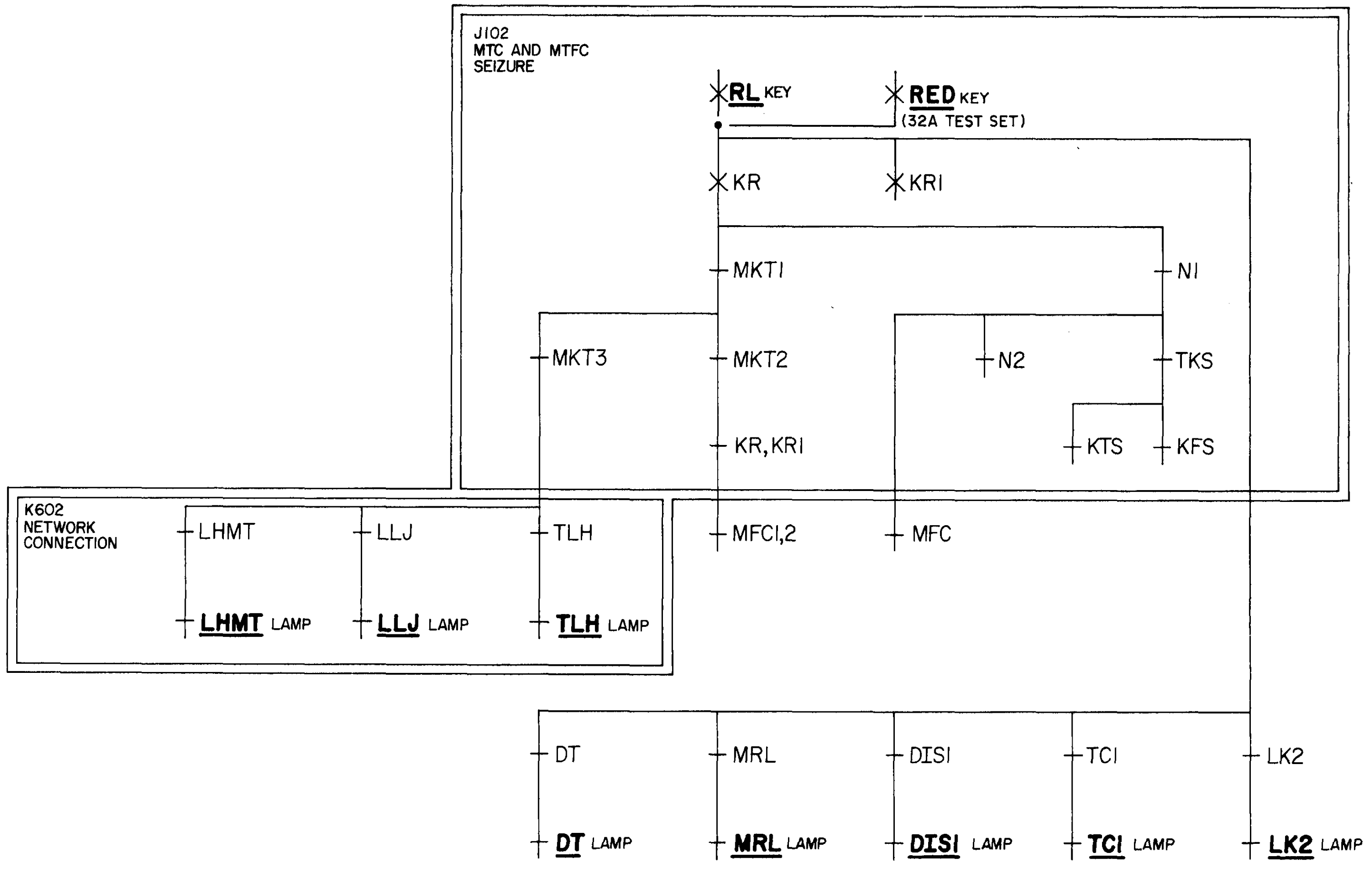
BRUNING 44-131 28142



SEQUENCE CHART
TEST FRAME
RESTORED TO NORMAL

ISSUE	DWG SIZE
5	6S

SFD-10-01- K706 BELL LABORATORIES

ING 44-131 28142

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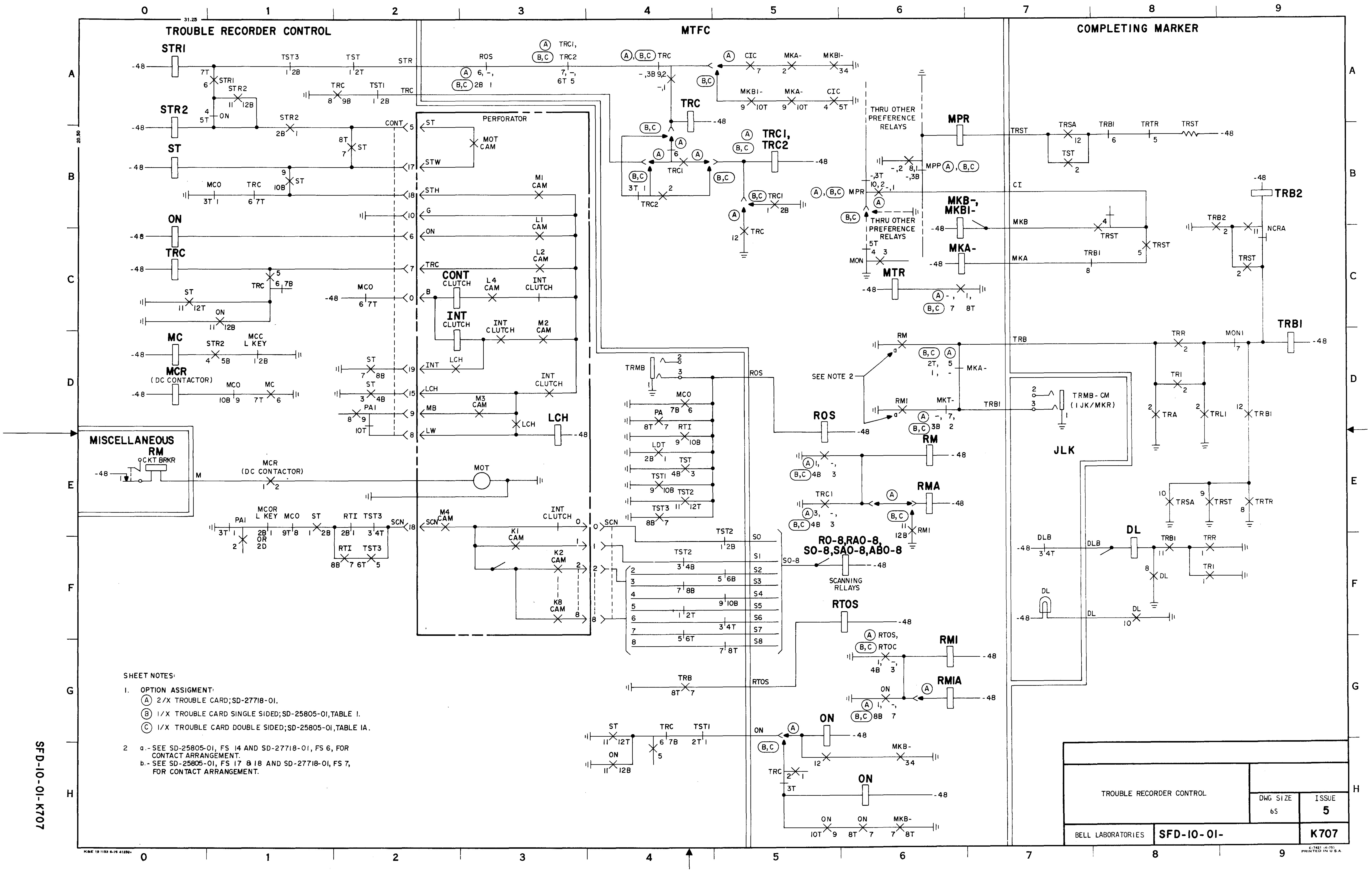
SFD-10-01-K706



SHEET NOTES:

1. OPTION ASSIGMENT:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
2. a.- SEE SD-25805-01, FS 14 AND SD-27718-01, FS 6, FOR CONTACT ARRANGEMENT.
   b.- SEE SD-25805-01, FS 17 & 18 AND SD-27718-01, FS 7, FOR CONTACT ARRANGEMENT.

TROUBLE RECORDER CONTROL	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	K707

SFD-10-01-K707

E-7421 (6-75)
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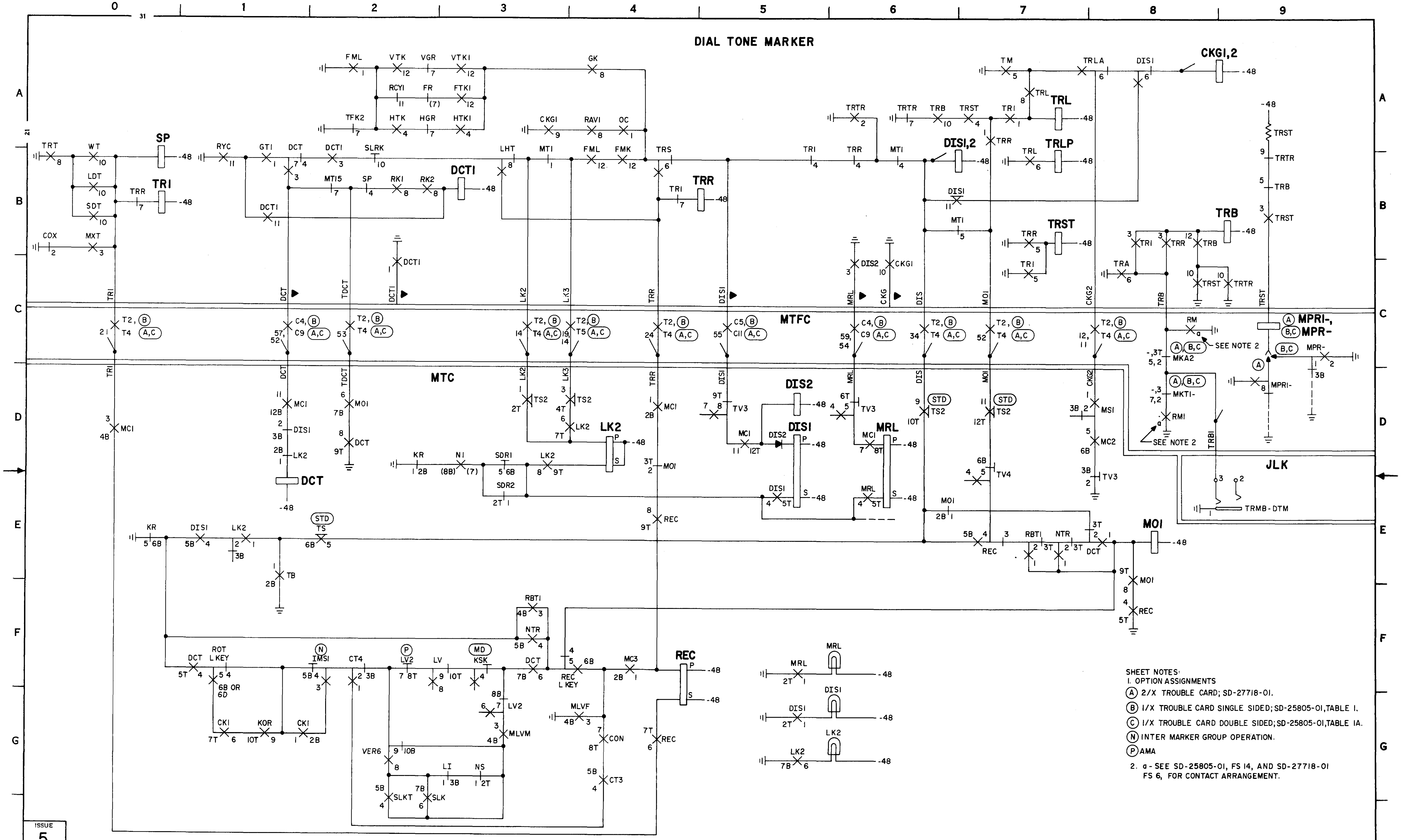

SHEET NOTES:
1. OPTION ASSIGNMENTS
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
Ⓝ INTER MARKER GROUP OPERATION.
Ⓟ AMA
2. a - SEE SD-25805-01, FS 14, AND SD-27718-01 FS 6, FOR CONTACT ARRANGEMENT.

ISSUE
5

SFD-10-01-K708

DISCONNECT CONTROL
(DT CLASS)

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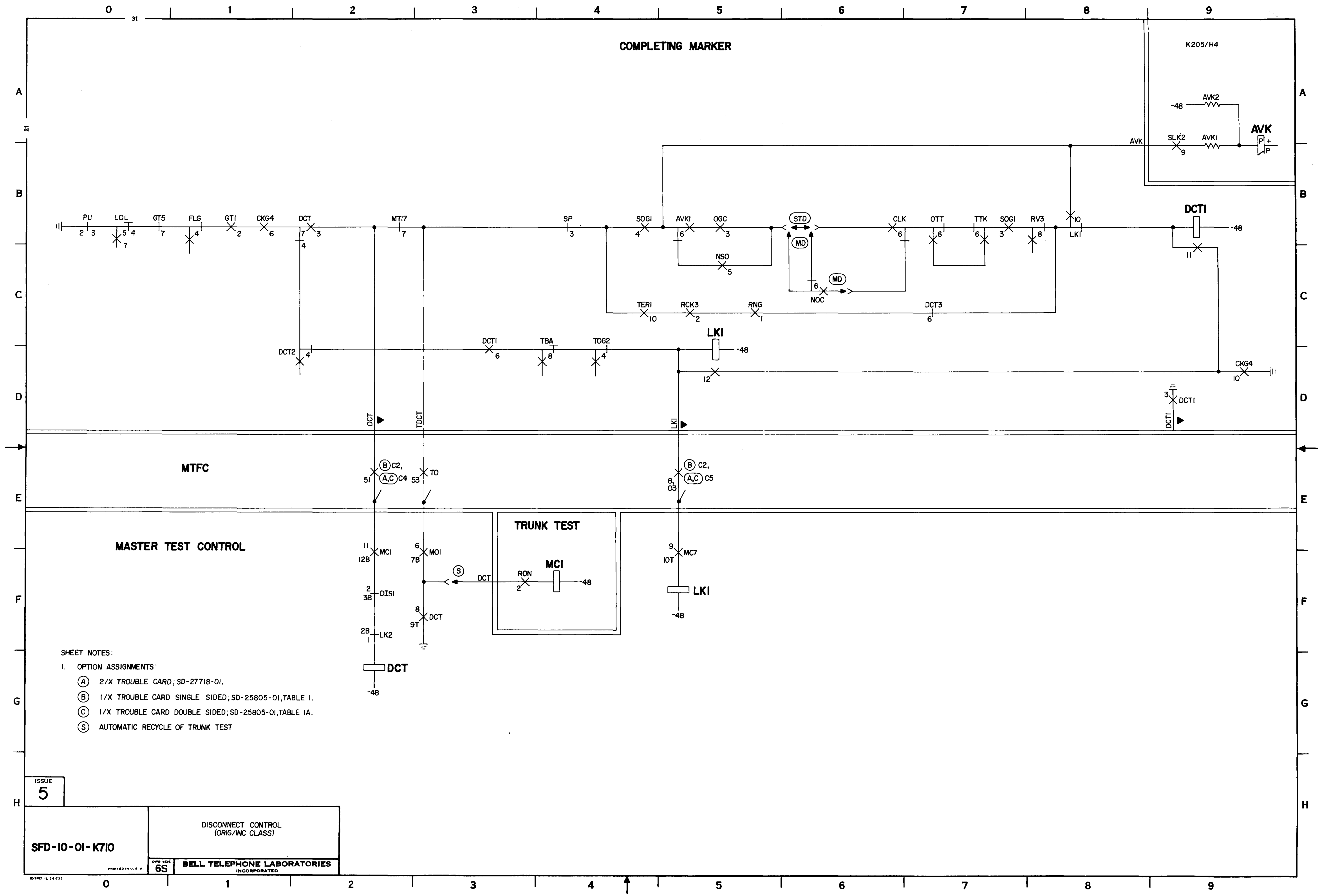
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-K708



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
   - Ⓢ AUTOMATIC RECYCLE OF TRUNK TEST

ISSUE
5

SFD-10-01-K710

DISCONNECT CONTROL
(ORIG/INC CLASS)

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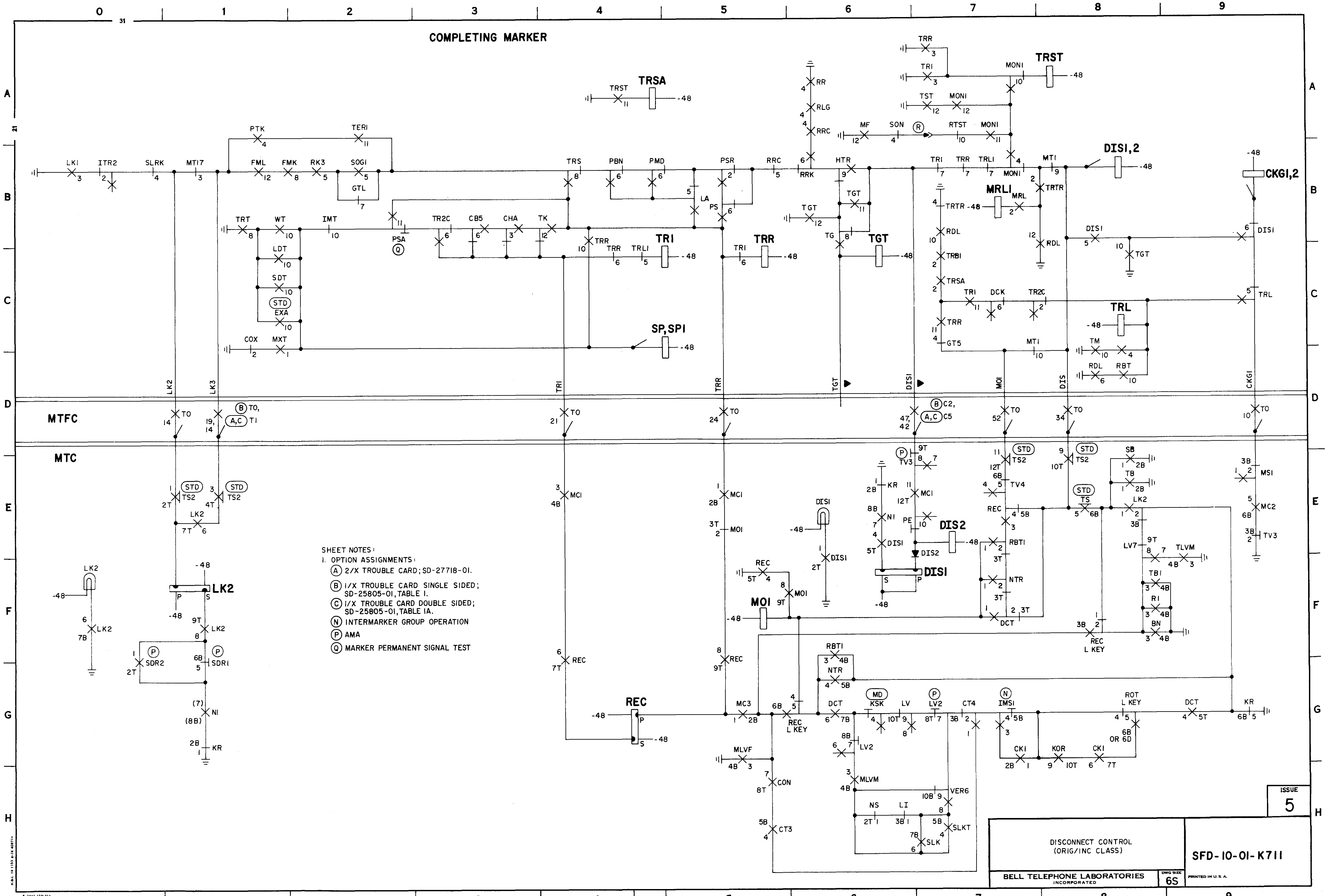
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-K710



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA.
   - Ⓝ INTERMARKER GROUP OPERATION
   - Ⓟ AMA
   - Ⓠ MARKER PERMANENT SIGNAL TEST

DISCONNECT CONTROL
(ORIG/INC CLASS)

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

SFD-10-01-K711

ISSUE 5

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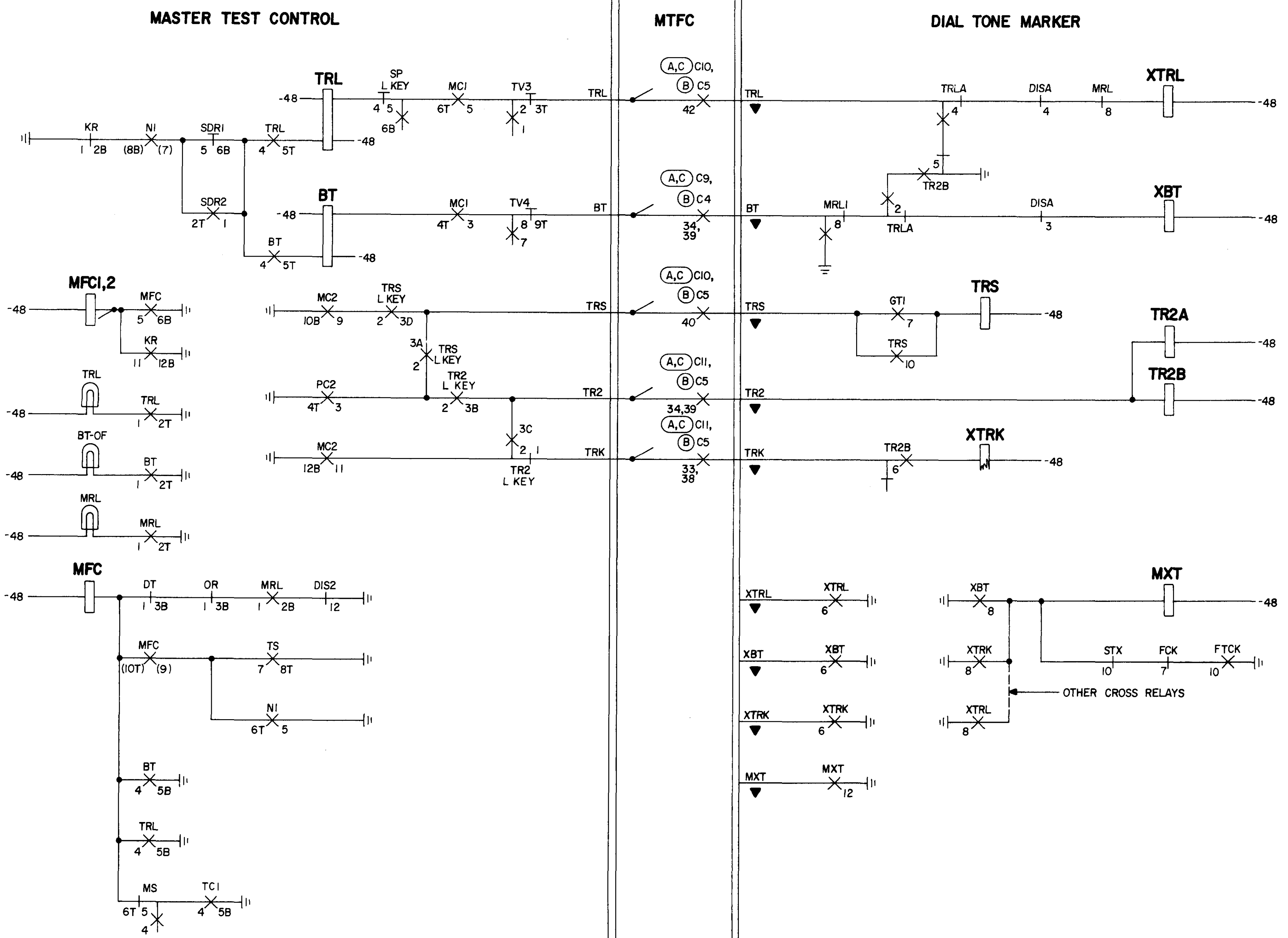
SFD-10-01-K711



ISSUE
5

SFD-10-01-K712

TIMING CONTROL
(DT CLASS)

6S
BELL TELEPHONE LABORATORIES
INCORPORATED

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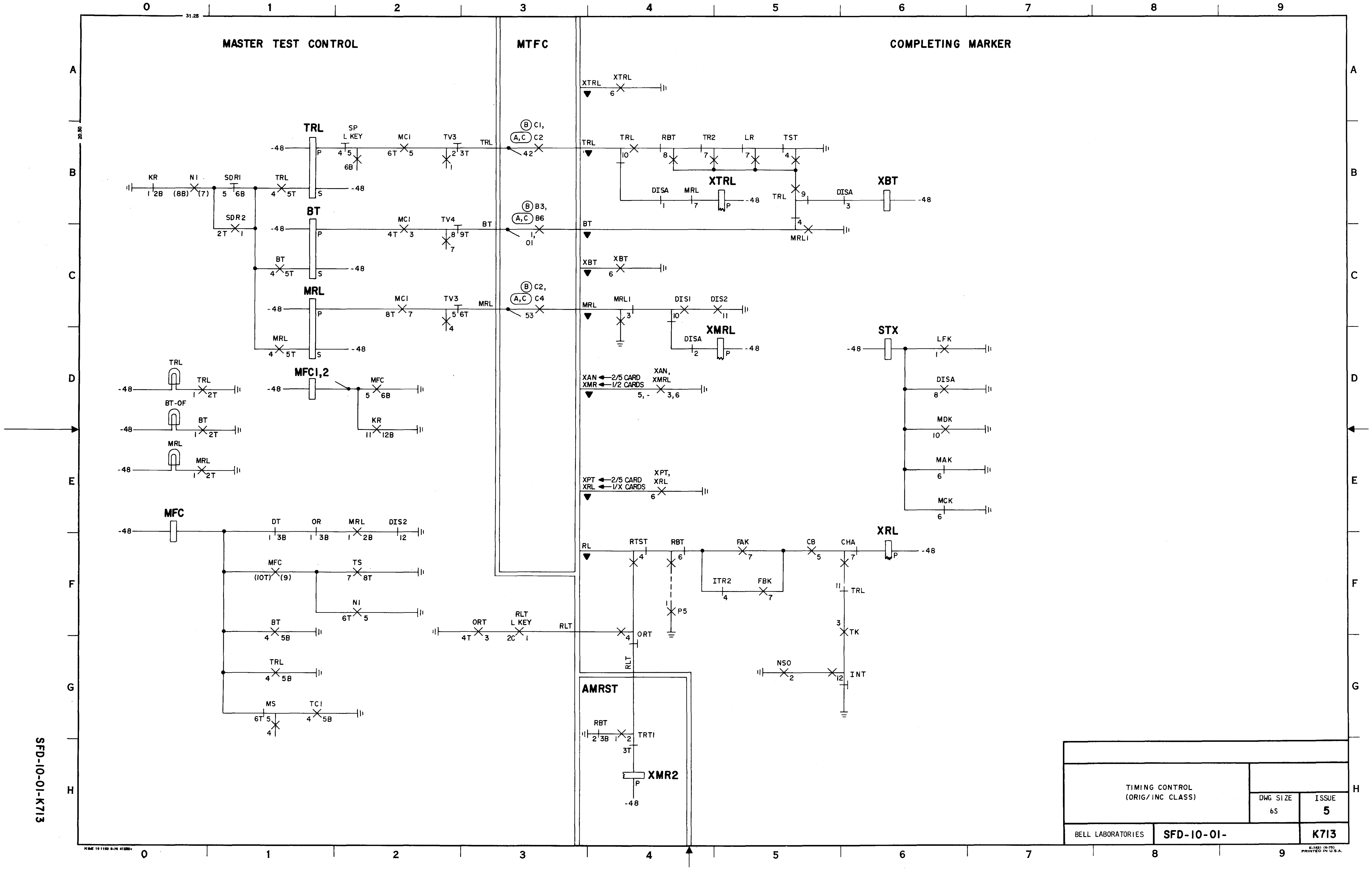
SFD-10-01-K712



TIMING CONTROL
(ORIG/INC CLASS)

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- K713

SFD-10-01-K713

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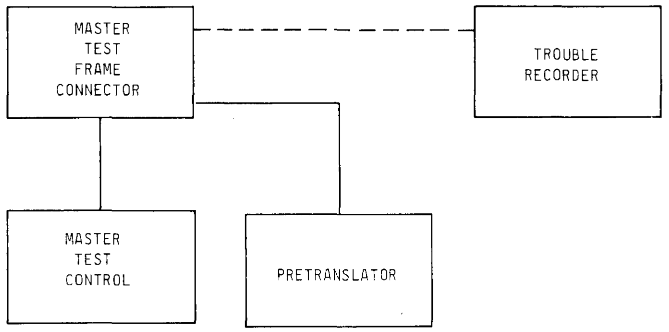
K806	PRETRANSLATOR CODE TRANSLATION
K807	PRETRANSLATOR CODE TRANSLATION
K808	PRETRANSLATOR ALARMS
K809	CROSS CONNECTING INFORMATION
K810	PRETRANSLATOR RELEASE



CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE 5

PART K8
PRETRANSLATOR CLASS OF TEST

SFD-10-01-K801

BELL TELEPHONE LABORATORIES
INCORPORATED

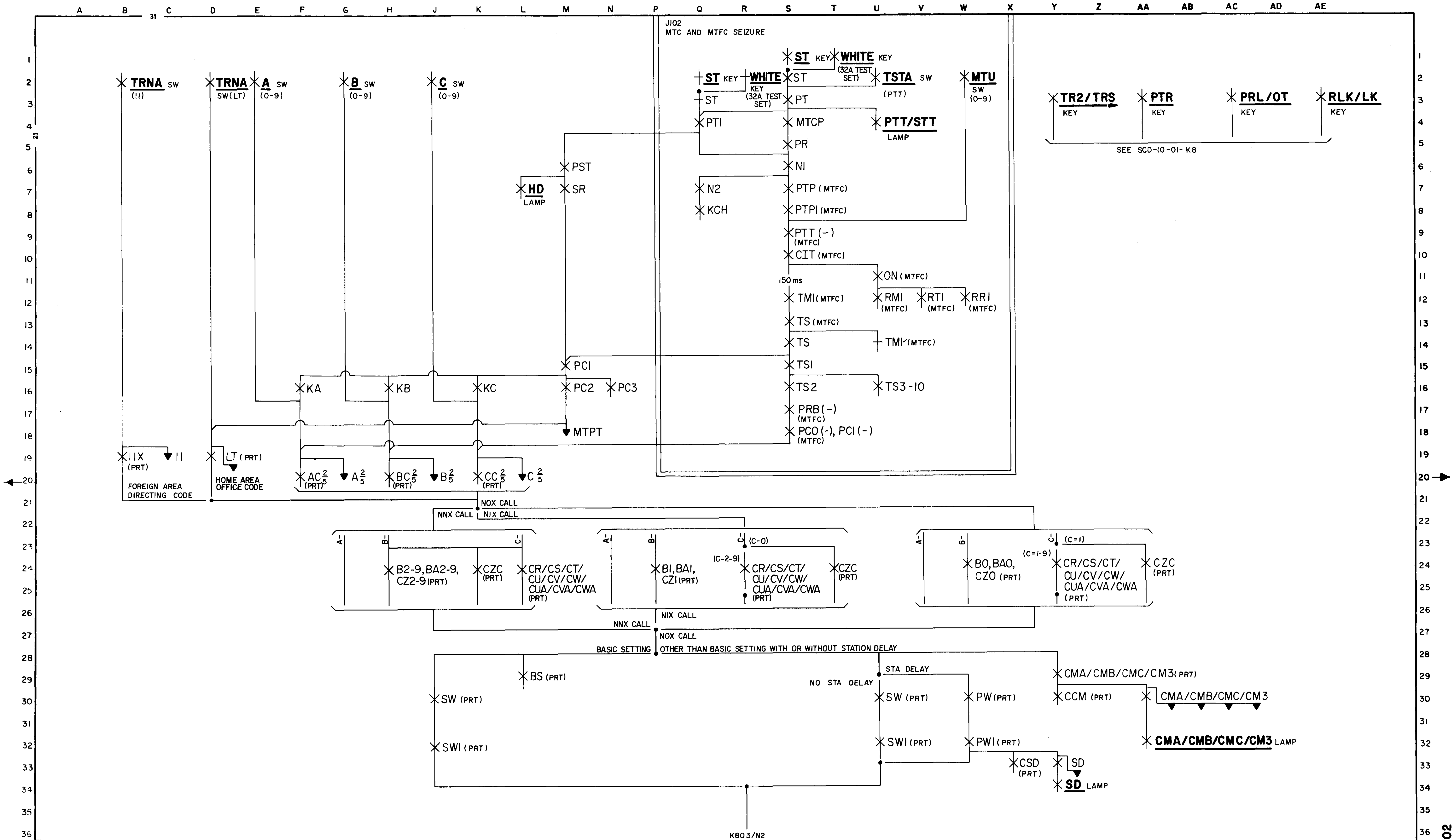
DWG SIZE 6S

PRINTED IN U. S. A.

SFD-10-01-K801
2 SHEETS, SHEET 1

K&E 19 1153 3-75 40991•

E-7421 (10-71)



ISSUE
5

SFD-10-10-K802

SEQUENCE CHART
PRETRANSLATOR CLASS OF TEST

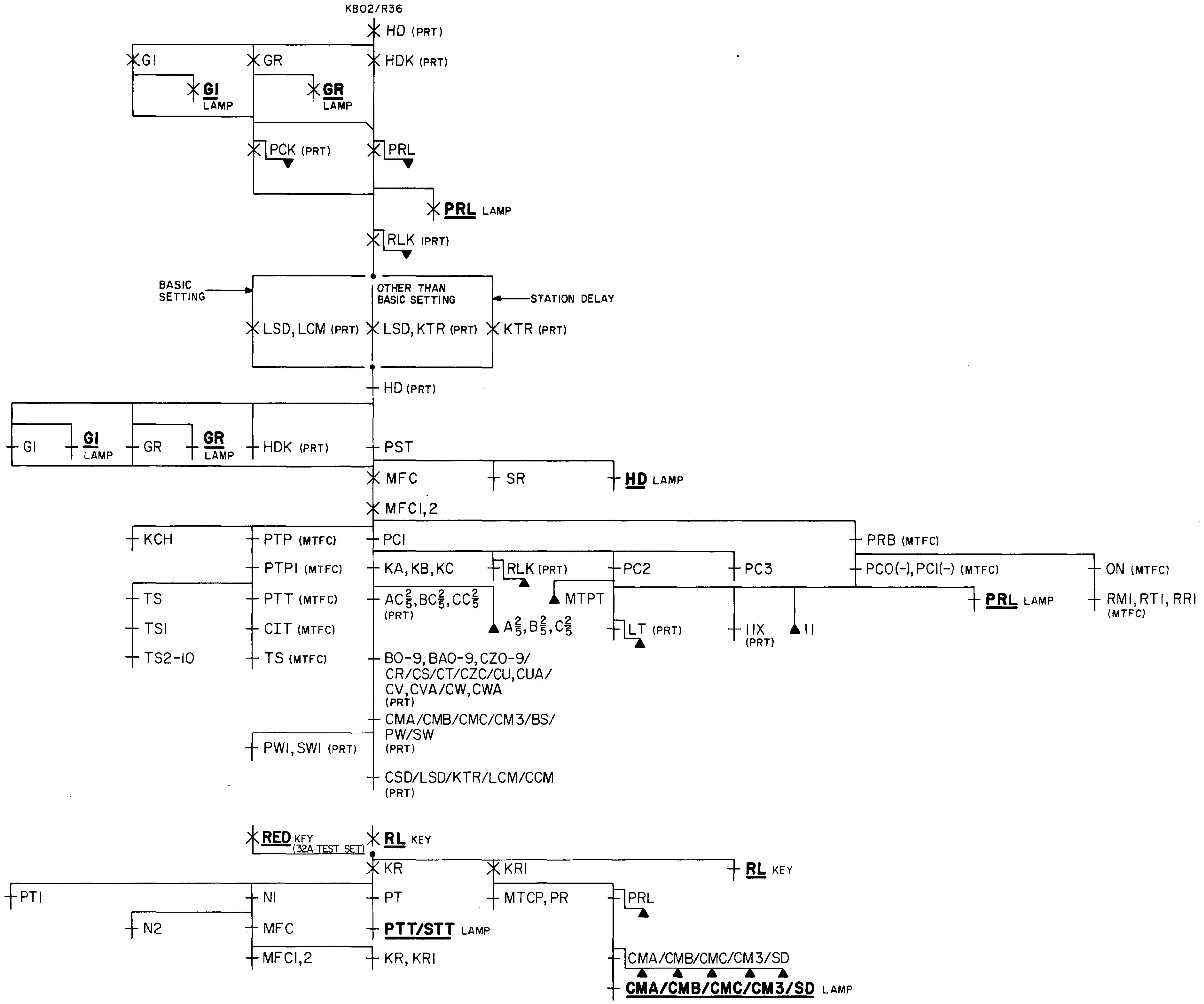
PRINTED IN U.S.A.

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-K802



SEQUENCE CHART
PRETRANSLATOR CLASS
OF TEST

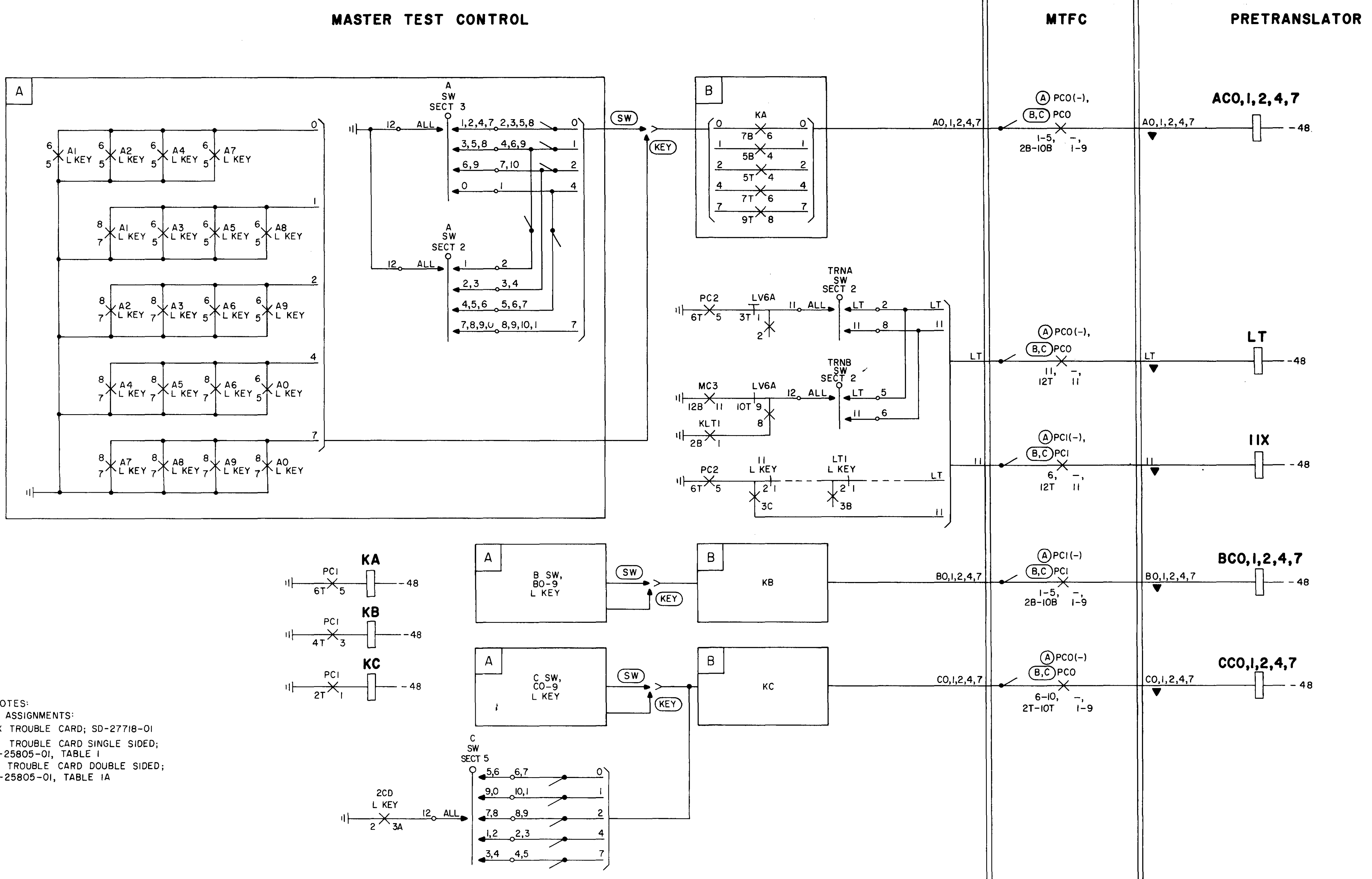
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES

SFD-10-01-K803

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-K804

INPUTS TO PRETRANSLATOR

DWG SIZE 6S

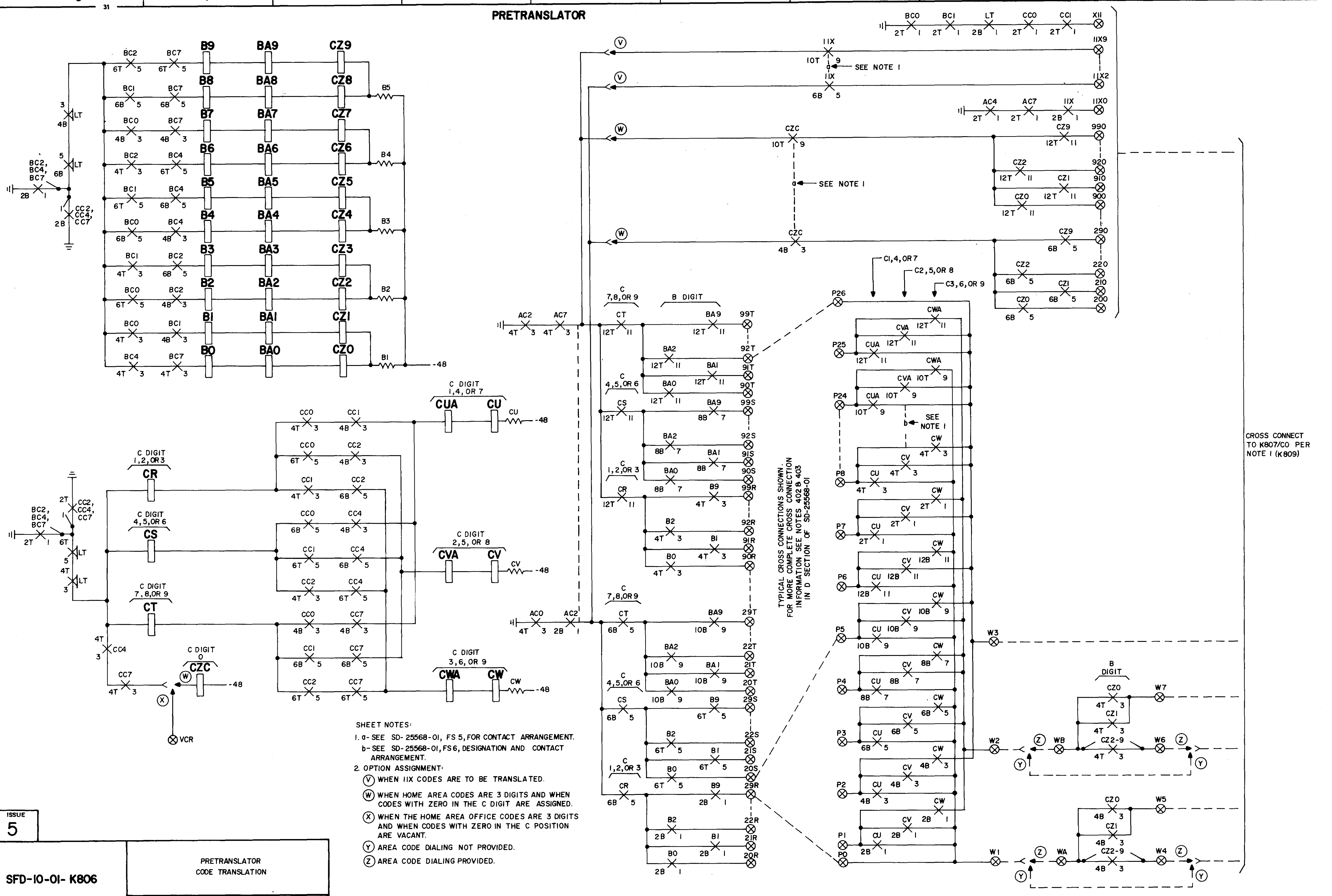
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-71)

SFD-10-01-K804

PRETRANSLATOR



SHEET NOTES:

1. a- SEE SD-25568-01, FS 5, FOR CONTACT ARRANGEMENT.
   b- SEE SD-25568-01, FS 6, DESIGNATION AND CONTACT ARRANGEMENT.
2. OPTION ASSIGNMENT:
   - (V) WHEN 11X CODES ARE TO BE TRANSLATED.
   - (W) WHEN HOME AREA CODES ARE 3 DIGITS AND WHEN CODES WITH ZERO IN THE C DIGIT ARE ASSIGNED.
   - (X) WHEN THE HOME AREA OFFICE CODES ARE 3 DIGITS AND WHEN CODES WITH ZERO IN THE C POSITION ARE VACANT.
   - (Y) AREA CODE DIALING NOT PROVIDED.
   - (Z) AREA CODE DIALING PROVIDED.

ISSUE
5

SFD-10-01- K806

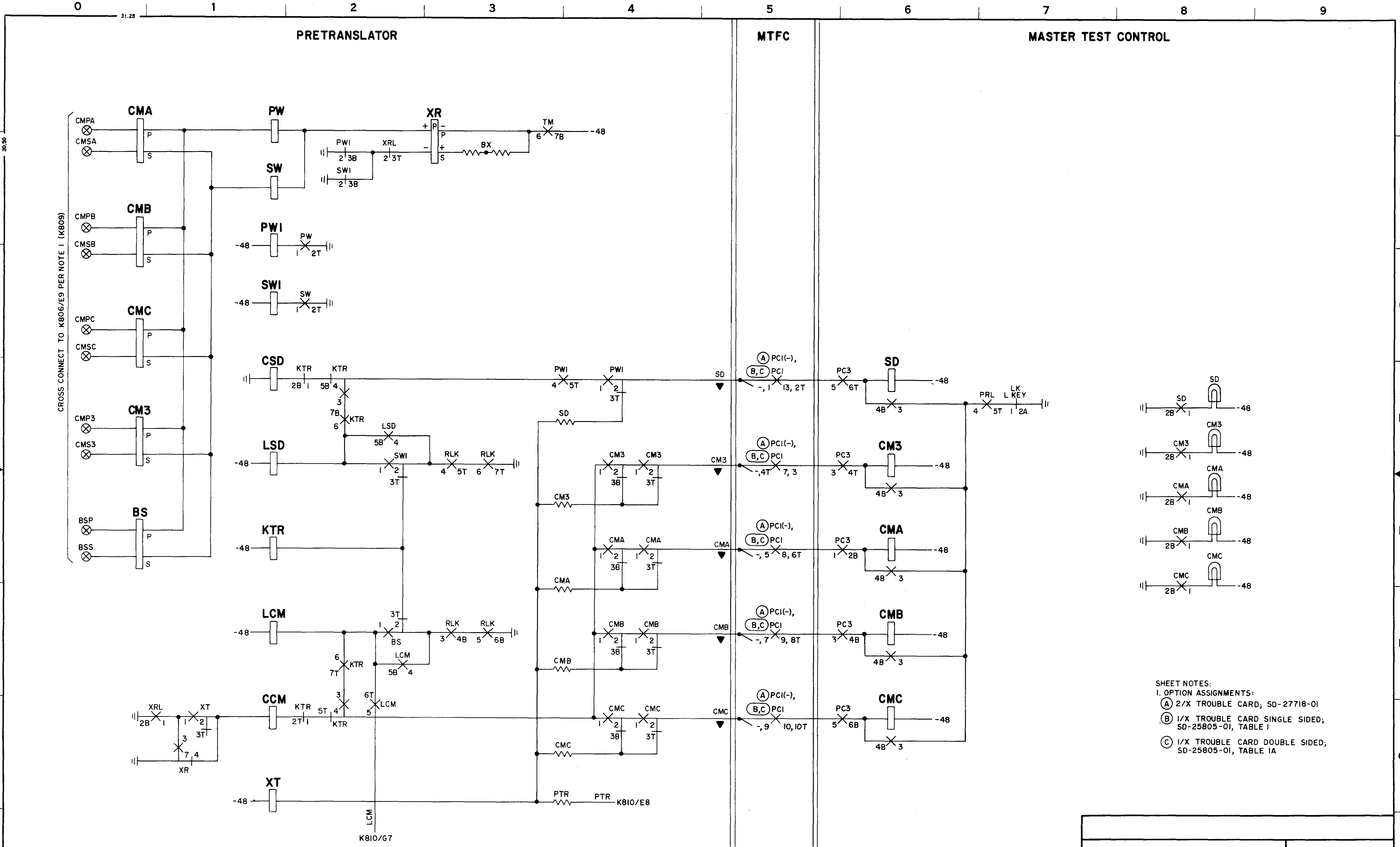
PRETRANSLATOR
CODE TRANSLATION

6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-K806



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

PRETRANSLATOR CODE TRANSLATION	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	K807

SFD-10-01-K807

K&E 19 1153 6-76 41250

E-7421 (6-75)
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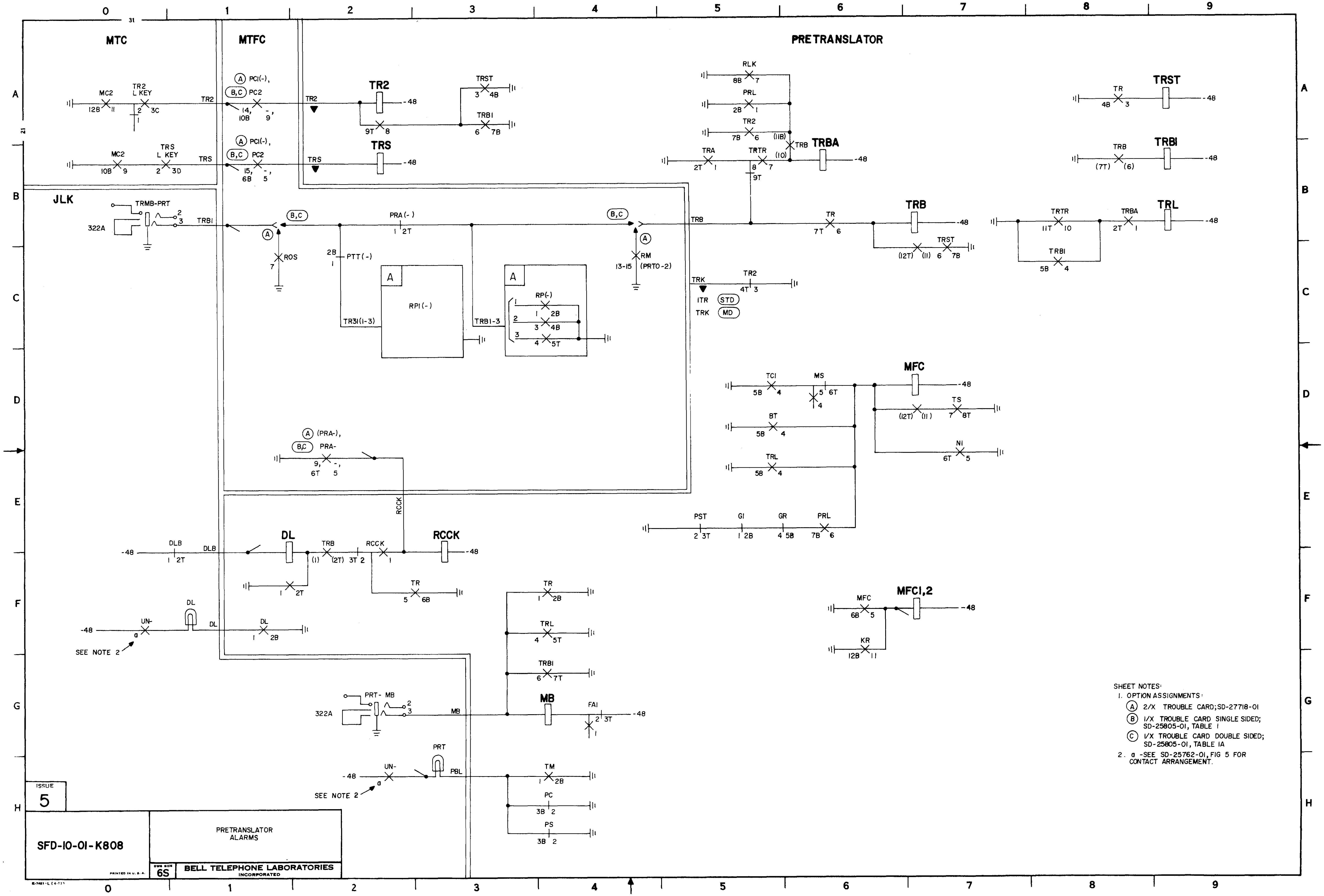


SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
2. a -SEE SD-25762-01, FIG 5 FOR CONTACT ARRANGEMENT.

ISSUE
5

SFD-10-01-K808

PRETRANSLATOR
ALARMS

PRINTED IN U.S.A.
DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-71)

SFD-10-01-K808

NOTES:

1.

		CROSS CONNECT								OR COIN RETURN	REMARKS
	FROM	TO									
		AREA CODE DIALING NOT PROVIDED			AREA CODE DIALING PROVIDED						
		DIGITS EXPECTED			DIGITS EXPECTED						
		3	7	7 OR 8 (STA DELAY)	3	7	7 OR 8 (STA DELAY)	10	10 OR 11 (STA DELAY)		
	W1	-	BSS	BSP	← WA →						
	W2	-	BSS	BSP	← WB →						
	W3	CMS3			CMS3					NO	VAC CODE
		CMP3			CMP3					YES	
	W4					BSS	BSP				
	W5							CMSC	CMPC		
	W6					BSS	BSP				
	W7							CMSC	CMPC		
ZERO IN C DIGIT NOT PROV	VCR	CMS3			CMS3					NO	VAC CODE
		CMP3			CMP3					YES	
PROV	200 TO 990	CMS3			CMS3					NO	VAC CODE
		CMP3			CMP3					YES	
			BSS	BSP		BSS	BSP				
								CMSC	CMPC		
	X11	CMS3			CMS3					NO	3 DIGIT SERVICE CODE OR VAC CODE
		CMP3			CMP3					YES	
	11X0	CMS3			CMS3					NO	VAC CODE
		CMP3			CMP3					YES	
	11X(2-9)	CMS3			CMS3					NO	3 DIGIT SERVICE CODE OR VAC CODE
		CMP3			CMP3					YES	
			BSS	BSP		BSS	BSP				

CROSS CONNECT INFORMATION FOR FEATURES SELDOM USED IS CROSS HATCHED.

2. ASSIGNMENT OF P TERMINALS

TABLE A

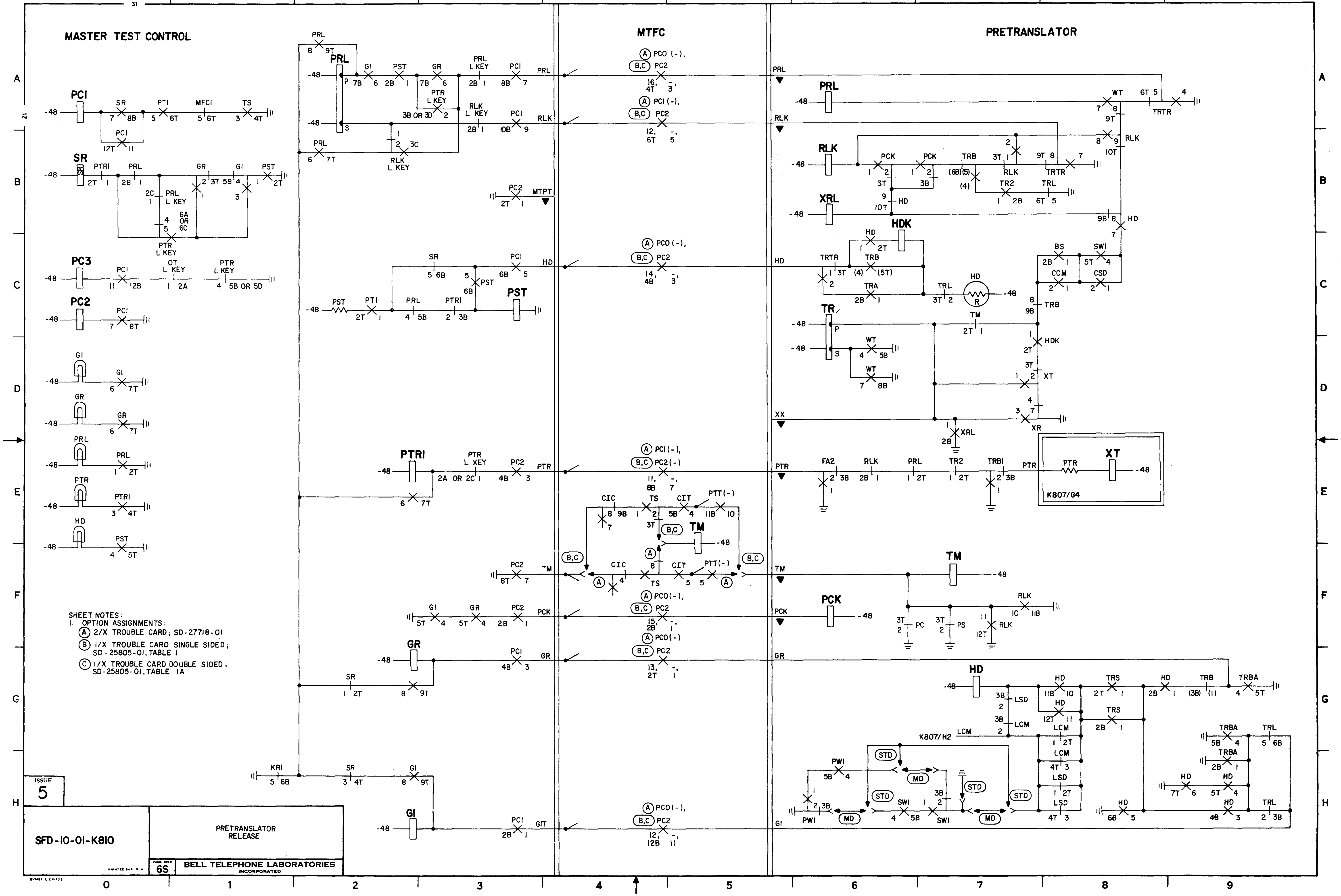
OFFICE CODE HAVING "C" DIGIT			ASSIGN TO P-TERM.
1, 4, OR 7	2, 5, OR 8	3, 6, OR 9	
NO. OF DIGITS TO BE AWAITED			
7	7	7	0
7	7	7 OR 8	1
7	7	3	2
7	7 OR 8	7	3
7	7 OR 8	7 OR 8	4
7	7 OR 8	3	5
7	3	7	6
7	3	7 OR 8	7
7	3	3	8
7 OR 8	7	7	9
7 OR 8	7	7 OR 8	10
7 OR 8	7	3	11
7 OR 8	7 OR 8	7	12
7 OR 8	7 OR 8	7 OR 8	13
7 OR 8	7 OR 8	3	14
7 OR 8	3	7	15
7 OR 8	3	7 OR 8	16
7 OR 8	3	3	17
3	7	7	18
3	7	7 OR 8	19
3	7	3	20
3	7 OR 8	7	21
3	7 OR 8	7 OR 8	22
3	7 OR 8	3	23
3	3	7	24
3	3	7 OR 8	25
3	3	3	26

TABLE B

XOX OR X1X CODE HAVING "C" DIGIT			ASSIGN TO P-TERM.
1, 4, OR 7	2, 5, OR 8	3, 6, OR 9	
NO. OF DIGITS TO BE AWAITED			
10	10	10	0
10	10	10 OR 11	1
10	10	3	2
10	10 OR 11	10	3
10	10 OR 11	10 OR 11	4
10	10 OR 11	3	5
10	3	10	6
10	3	10 OR 11	7
10	3	3	8
10 OR 11	10	10	9
10 OR 11	10	10 OR 11	10
10 OR 11	10	3	11
10 OR 11	10 OR 11	10	12
10 OR 11	10 OR 11	10 OR 11	13
10 OR 11	10 OR 11	3	14
10 OR 11	3	10	15
10 OR 11	3	10 OR 11	16
10 OR 11	3	3	17
3	10	10	18
3	10	10 OR 11	19
3	10	3	20
3	10 OR 11	10	21
3	10 OR 11	10 OR 11	22
3	10 OR 11	3	23
3	3	10	24
3	3	10 OR 11	25
3	3	3	26

CROSS CONNECTING INFORMATION

BELL LABORATORIES	SFD-10-01-	DWG SIZE 6S	ISSUE 5
			K809



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-K810

PRETRANSLATOR
RELEASE

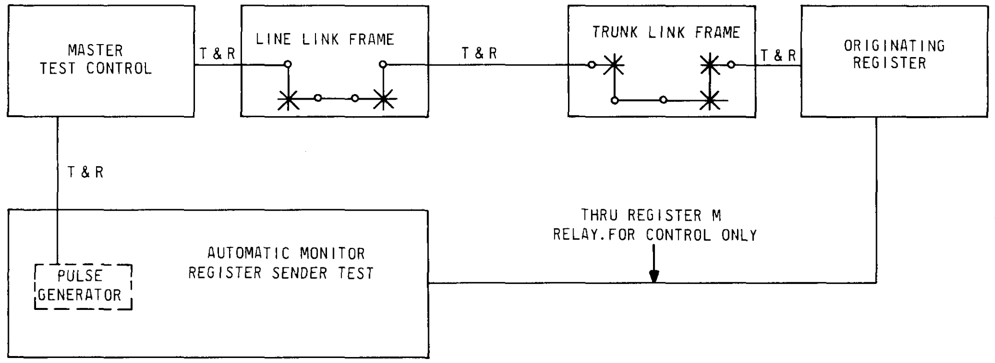
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

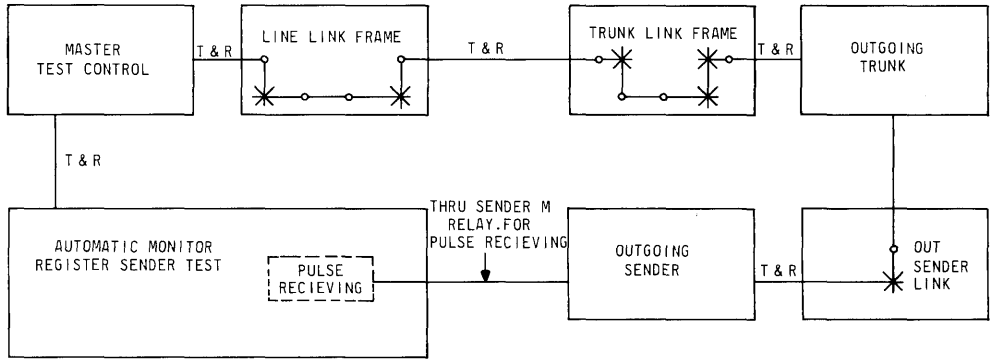
PRINTED IN U.S.A.

E-7421-L (4-71)

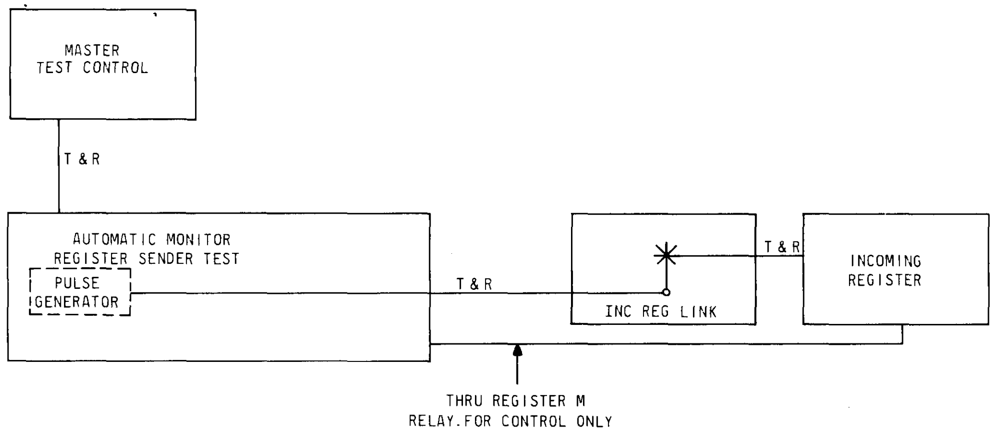
ORIGINATING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR



SENDER CLASS OF TEST USING AUTOMATIC MONITOR



INCOMING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR



INDEX

PAGE NO.	TITLE
L001	PART LO - TROUBLE ANALYSIS REGISTER AND SENDER TESTS
L002	TEST SET UP - ORIGINATING REGISTER (OR) TEST
L003	SEQUENCE CHART - TEST ANALYSIS - ORIGINATING REGISTER (OR) TEST
L004	TEST SET UP - OUTGOING SENDER (SDR) TEST
L005	SEQUENCE CHART - TEST ANALYSIS - OUTGOING SENDER (SDR) TEST
L006	TEST SET UP - INTERMARKER GROUP SENDER (IMS) CLASS OF TEST SUBSCRIBER TO **SUBSCRIBER-CALLING MARKER GROUP**
L007	SEQUENCE CHART - TEST ANALYSIS - INTERMARKER GROUP SENDER TEST (IMS)
L008	TEST SET UP - INCOMING REGISTER (IR) TEST
L009	SEQUENCE CHART - TEST ANALYSIS - INCOMING REGISTER (IR) TEST

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE 5

PART LO
TROUBLE ANALYSIS REGISTER
AND SENDER TESTS

SFD-10-01-L001

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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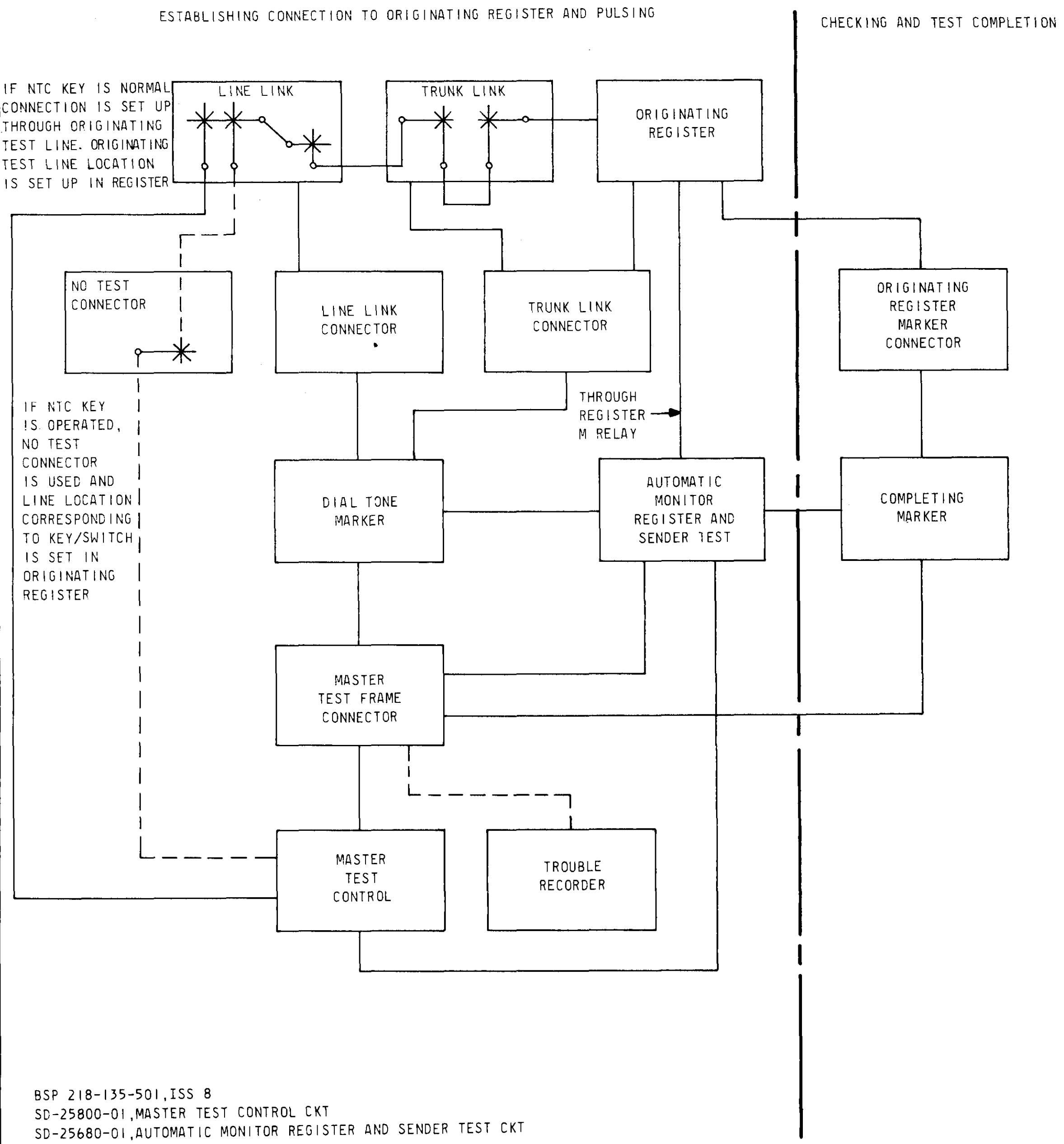
ORIGINATING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR


ESTABLISHING CONNECTION TO ORIGINATING REGISTER AND PULSING
CHECKING AND TEST COMPLETION
IF NTC KEY IS NORMAL CONNECTION IS SET UP THROUGH ORIGINATING TEST LINE. ORIGINATING TEST LINE LOCATION IS SET UP IN REGISTER
LINE LINK
TRUNK LINK
ORIGINATING REGISTER
NO TEST CONNECTOR
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
ORIGINATING REGISTER MARKER CONNECTOR
IF NTC KEY IS OPERATED, NO TEST CONNECTOR IS USED AND LINE LOCATION CORRESPONDING TO KEY/SWITCH IS SET IN ORIGINATING REGISTER
THROUGH REGISTER M RELAY
DIAL TONE MARKER
AUTOMATIC MONITOR REGISTER AND SENDER TEST
COMPLETING MARKER
MASTER TEST FRAME CONNECTOR
MASTER TEST CONTROL
TROUBLE RECORDER

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	67	OR KEY	ORIGINATING REGISTER CLASS OF TEST CALL ALLOWS ESTABLISHING A TEST CONNECTION FROM AN ORIGINATING REGISTER TO THE AUTOMATIC MONITOR AS ILLUSTRATED BY BLOCK DIAGRAM.
	74	TSTA SW (OR)	
1,2		NONE	CLASS AND TRANSLATION OPERATED TO PROVIDE A CHECK OF CLASS AND TRANSLATION INFORMATION PASSED FROM ORIGINATING REGISTER TO THE AMRST VIA THE COMPLETING MARKER. THESE KEYS ARE NEEDED WHEN NQ OPTION IS PROVIDED IN MTC.
	11,NQ	CL SW (OR-DP/MF) AND TRNA SW (LT)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTTI KEY	
1,2	4,KX	A-G (0-9) KEY	CALLED DIGITS (A-G) SELECTS DIGITS TO BE PULSED INTO ORIGINATING REGISTER BY MONITOR.
	4,KZL, ZVM	A-G SW (0-9)	ON OTHER THAN LOCAL CALLS SEE PREFIX DIGIT KEYS AND SWITCHES.
1,2	1,G	MF/MLF KEY (OPR/N-OPR)	ORIGINATING REGISTER GROUP SIGNALS THE DTM TO ESTABLISH A CONNECTION TO PARTICULAR REGISTER GROUP DP,MF OR MLF.
	124	RG SW (DP/MF/ MLF)	* WHEN MF/MLF KEY PROVIDED DP REGISTER GROUP IS SELECTED WITH KEY NORMAL.
1,4		SURGE KEY	SURGE PROVIDES FOR TESTING THE DIAL REGISTER PULSING CIRCUITS ON A SURGE HOLD CONDITION. (DP REGISTERS)
		PB KEY	"TOUCH-TONE" PREPARES THE "TOUCH-TONE" OSCILLATOR FOR PULSING. (TT REGISTERS)
1,4		STT KEY	START TEST OPERATED TO CONDITION THE AMRST FOR THE START OF TESTING.
2	9	FS/ NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEYS OR SWITCH. WITH FS KEY OPERATED FIRST TESTING FOR IDLE TRUNKS ON THAT TLF WITH NTFS KEY OPERATED WITHOUT FIRST TESTING FOR IDLE TRUNKS ON THAT TLF.
2	U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS (0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
	79	FG (0-2) KEY	
	80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
2	U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) AND FG(0-2) KEYS LOOK BUSY. WITH NTFS KEY OPERATED, SIGNALS THE MARKER TO SELECT THE TRUNK LINK FRAME CORRESPONDING TO THE OPERATED FS(0-9) AND FG(0-2) KEYS DISREGARDING TEST FOR IDLE TRUNKS ON THAT FRAME.
	80	FS SW (0-9)	

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0 19) KEYS OR SWITCH LOOK BUSY TO THE MARKER. WITH THE NTTS KEY OPERATED, TST RELAY IN THE TLF WILL OPERATE WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME
2	9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS (0-9) KEY OR SWITCH LOOK BUSY TO THE MARKER
	9,JF	TSU SW (0-9)	
		TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.
3	3	REP KEY	REPEAT KEY CAUSES A TEST CALL TO A REGISTER TO BE REPEATED AFTER SUCCESSFUL CHECK BY THE AUTOMATIC MONITOR
3,4		MOTL KEY	MONITOR ORIGINATING TEST LINE ALLOWS LISTENING ON TEST CALL.
1	1	ST/RL	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.

BSP 218-135-501,ISS 8
SD-25800-01,MASTER TEST CONTROL CKT
SD-25680-01,AUTOMATIC MONITOR REGISTER AND SENDER TEST CKT

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.
4. KEY(S) OR SWITCH(ES) LOCATED ON AMRST PANEL.

ISSUE
5

SFD-10-01-L002

TEST SET UP
ORIGINATING REGISTER (OR) TEST

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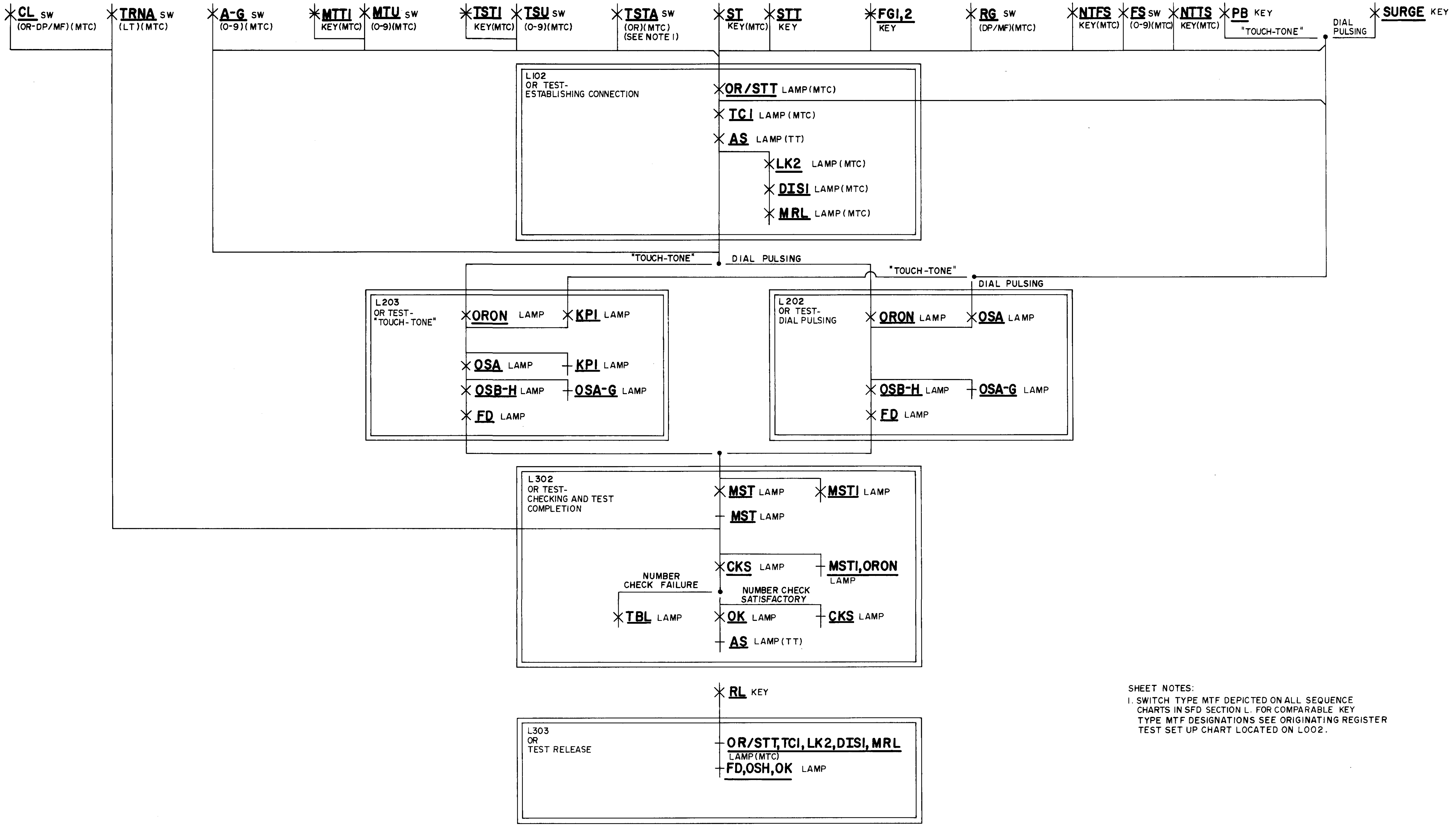
DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED



SHEET NOTES:

1. SWITCH TYPE MTF DEPICTED ON ALL SEQUENCE CHARTS IN SFD SECTION L. FOR COMPARABLE KEY TYPE MTF DESIGNATIONS SEE ORIGINATING REGISTER TEST SET UP CHART LOCATED ON L002.

ISSUE 5

SEQUENCE CHART
TEST ANALYSIS ORIGINATING
REGISTER (OR) TEST

SFD-10-01-L003

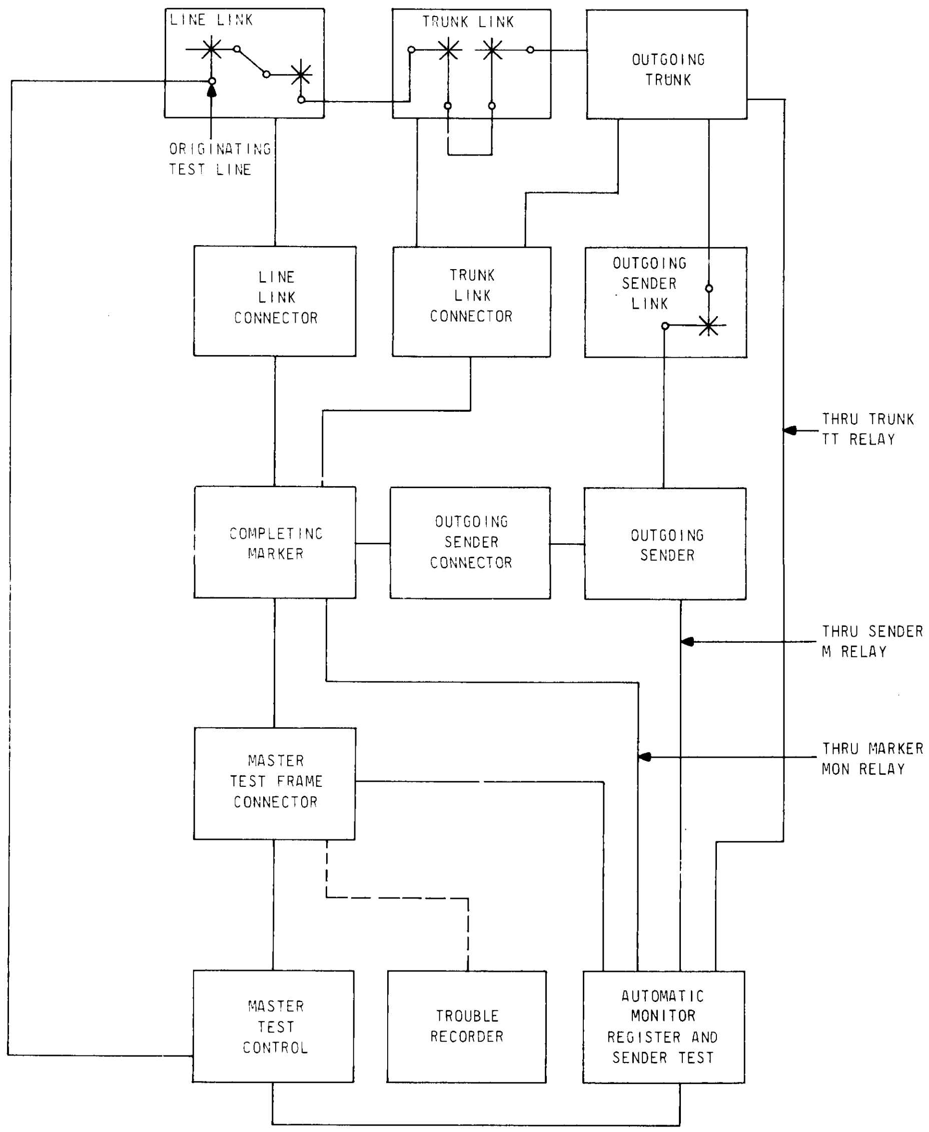
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

E-7421-8 (10-71)

SENDER CLASS OF TEST USING AUTOMATIC MONITOR



BSP 218-150-501, ISS 7 (DP)
BSP 218-156-501, ISS 10 (MF)
SD-25800-01, MASTER TEST CONTROL CIRCUIT (MTC)
SD-25680-01, AUTOMATIC MONITOR REGISTER AND SENDER TEST CIRCUIT (AMRST)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.
4. KEY(S) OR SWITCH(ES) LOCATED ON AMRST PANEL.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	67	SDR KEY	SENDER CLASS TEST CAUSES TEST CIRCUIT (MTC) TO CONNECT TO THE AUTOMATIC MONITOR REGISTER AND SENDER TEST CIRCUIT FOR THE PURPOSE OF TESTING THE SENDER SELECTED.
	74	TSTA SW (SDR)	
1,2	17,WX	FACD KEY	ORIGINATING CLASS WITH THE FACD KEY NORMAL OR CL SWITCH OPERATED TO OR-DP/MF, INDICATES AN ORIGINATING CLASS TO MARKER.
	11,NQ	CL SW (OR-DP/MF)	
	WW	NONE	
1,2	NT,OW	LOC TRNSL (ALL KEYS NORMAL)	TRANSLATION INDICATES TO MARKER LOCAL TRANSLATION
	11,NQ	TRNA SW (LT)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTT1 KEY	
1,2	4,KX	A-G (0-9) KEY	CALLED DIGITS (A-G) PRIMES THE MARKER WITH THE DIGITS TO BE PULSED OUT OF THE SENDER VIA THE OGT INTO THE AUTOMATIC MONITOR (AMRST) SELECT OFFICE CODE AVAILABLE TO SENDER GROUP TESTING.
	4,KZL, ZVM	A-G SW (0-9)	
1,2, 4		SG (0-10) KEY	SENDER GROUP SELECTS ANY ONE OF ELEVEN OF THE POSSIBLE TWELVE SENDER GROUPS.
		SG SEL SW (0-10)	
		SGT KEY	SENDER GROUP TENS SELECTS THE TWELFTH SENDER GROUP.
1	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER.
1,2	8, 35	SGA/ SGB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.
1,2	8, 83	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP.
	84	OS SW (0-4)	
1,4		MAC KEY	MONITOR AC ALLOWS ENERGIZING FILAMENTS OF VACUUM TUBES IN AUTOMATIC MONITOR.
1,4		STT KEY	START TEST OPERATED TO STT, CONDITIONS AUTOMATIC MONITOR FOR START OF TESTING.
1,2	7,XA, ZB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGITS TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1,2	37 GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
3	3	REP KEY	REPEAT TEST CAUSES SENDER TESTS TO BE REPEATED UPON RECEIVING A SIGNAL FROM THE AMRST TO THE MTC, THAT A TEST HAS BEEN COMPLETED SATISFACTORILY.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.

ISSUE
5

SFD-10-01-L004

TEST SET UP
OUTGOING SENDER (SDR) TEST

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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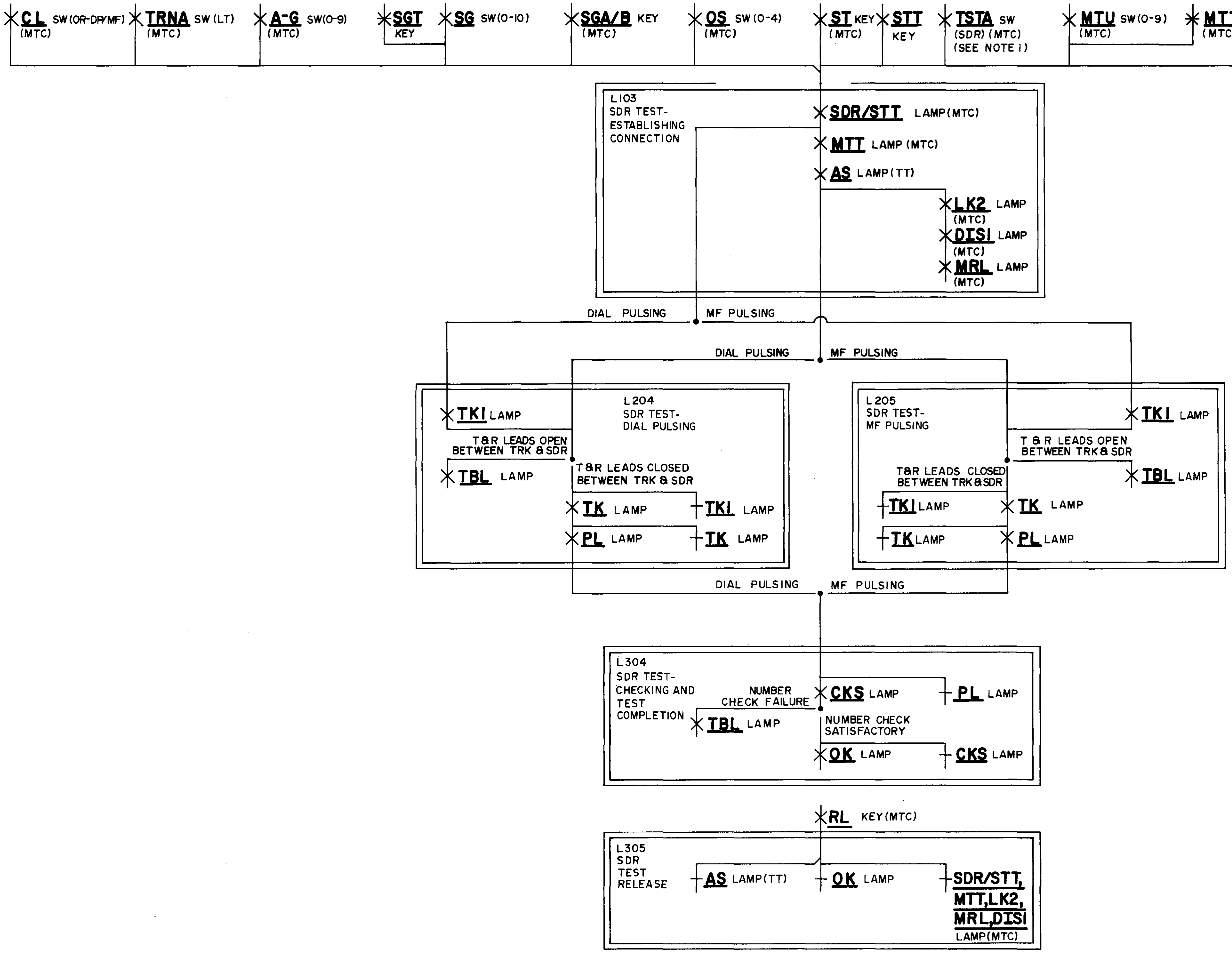

SHEET NOTES:

1. SWITCH TYPE MTF DEPICTED ON ALL SEQUENCE CHARTS IN SFD SECTION L. FOR COMPARABLE KEY TYPE MTF DESIGNATIONS SEE SENDER TEST SET UP CHART LOCATED ON L004.

ISSUE 5

SEQUENCE CHART
TEST ANALYSIS
OUTGOING SENDER (SDR) TEST

SFD-10-01-L005

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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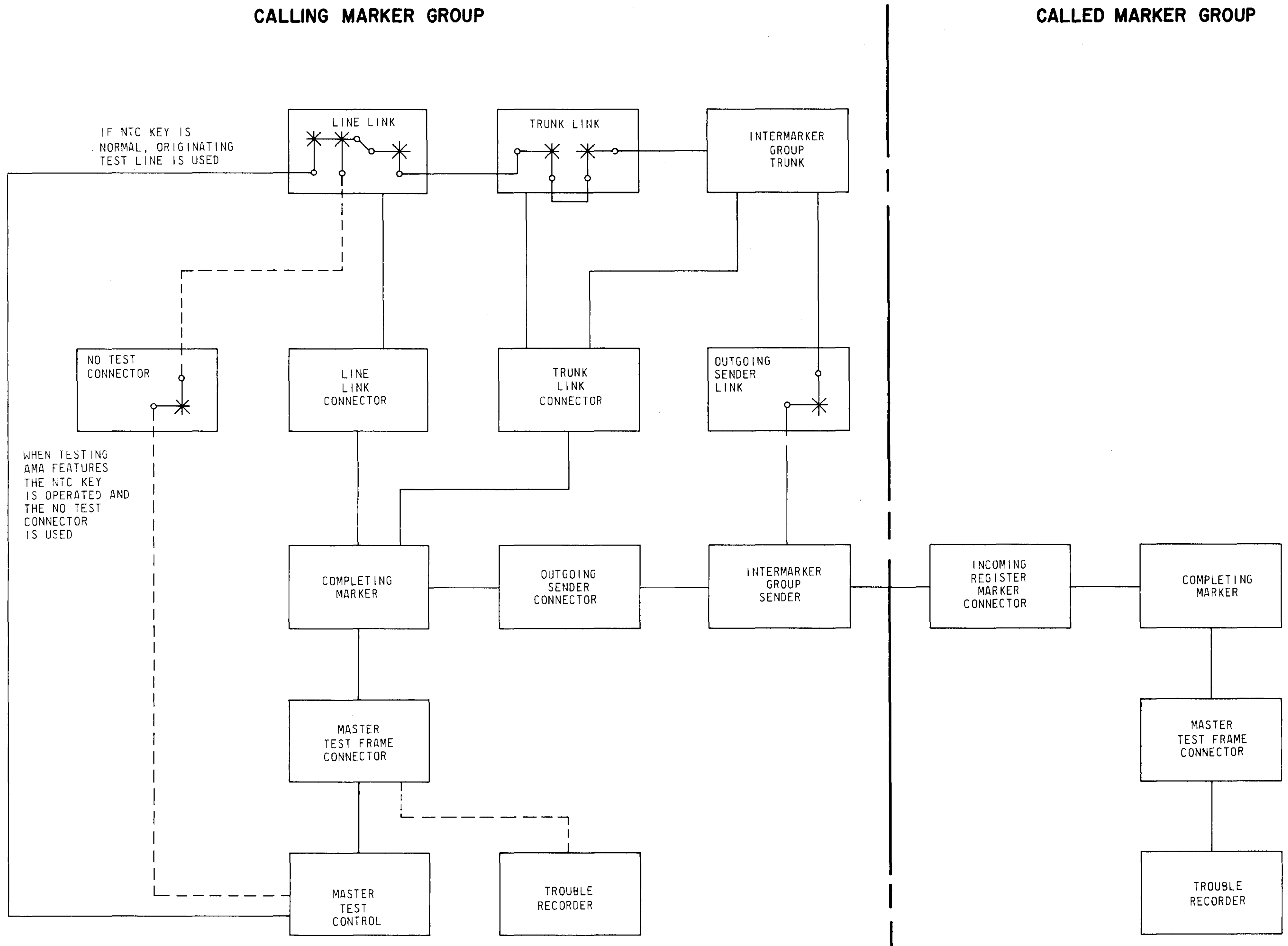
E-7421-B (10-71)

BRUNING 44-131 24092



SD-25800-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1,2	4,KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH THE THREE DIGIT INTERMARKER GROUP OFFICE CODE.
	4,KZL, ZVM	A-C SW (0-9)	
1,2	4,KX	D(0-9) KEY	CALLED DIGITS (D-G) PRIMES THE MARKER WITH THE CALLED DIGITS.
	4,KY	E(0-9) KEY	
	4,KZ	F(0-9) KEY	
	4,JA	G(0-9) KEY	
	4,ZVL, ZVM	D-G SW (0-9)	
1	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER.
1,2	8, 35	SGA/ SGB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.
1,2	8, 83	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP.
	84	OS SW (0-4)	
1,2	7,XA, XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37, GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED.
1,2	7,ED	CSGA/ CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE
3	13	ND KEY	NO DIGITS OPERATE TO PREVENT CALLING MARKER GROUP FROM CONNECTING TO CALLED MARKER GROUP.
3	17	ROT KEY	REORDER TEST SETS UP REORDER IN THE SENDER
2	9	GPA/GPB KEY	ALLOTTER GROUP A AND B USED ON TESTS REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.

BSP 218-158-501, ISS 5
SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OR TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-C802/C804/C806).
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

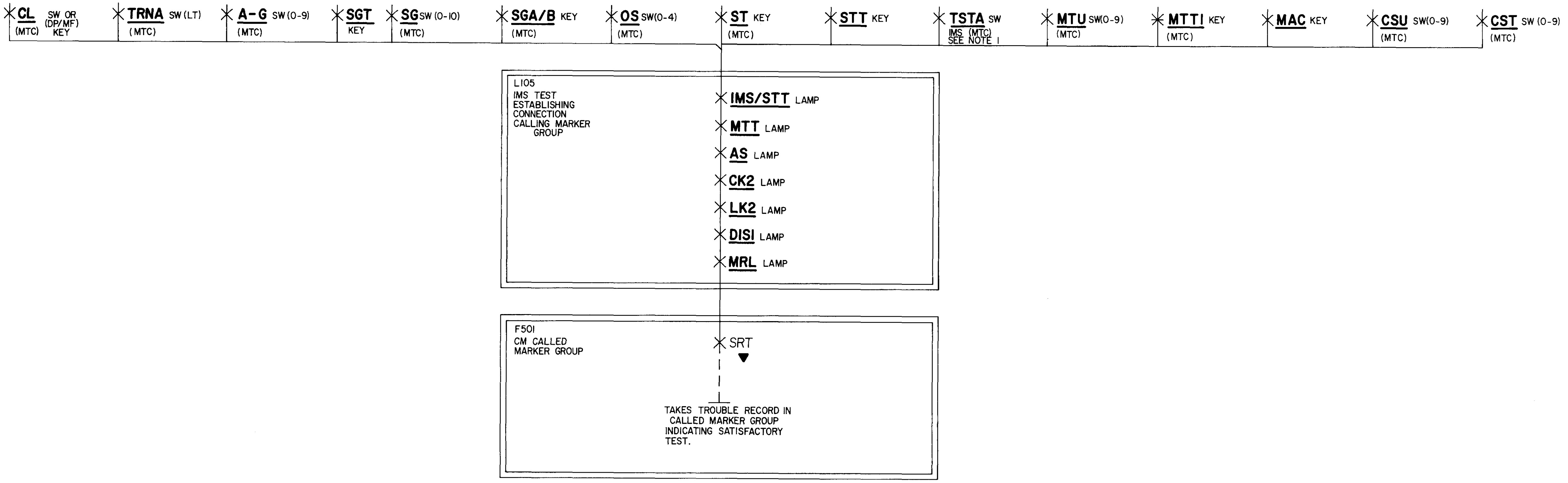
SD-25800-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	69, QL	IMS KEY	INTERMARKER GROUP SENDER TEST PREPARES THE MTC FOR DIRECTING A MARKER TO ESTABLISH A CONNECTION FROM THE MTC TO AN INTERMARKER GROUP TRUNK AND TO ASSOCIATE THE TRUNK WITH THE PARTICULAR INTERMARKER GROUP SENDER TO BE TESTED.
	74	TSTA SW (IMS)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTTI KEY	

ISSUE	DWG SIZE	
5	6S	TEST SET UP INTERMARKER GROUP SENDER (IMS) CLASS OF TEST SUBSCRIBER TO SUBSCRIBER CALLING MARKER GROUP

SFD-10-01- L006 BELL LABORATORIES

SFD-10-01-L006



SHEET NOTES:

1. SWITCH TYPE MTF, DEPICTED ON ALL SEQUENCE CHARTS IN SFD SECTION L. FOR COMPARABLE KEY TYPE MTF DESIGNATIONS, SEE IMS TEST SET UP CHART LOCATED ON L006.

SEQUENCE CHART

TEST ANALYSIS
INTERMARKER GROUP SENDER (IMS)
TEST

DWG SIZE 6S

ISSUE 5

BELL LABORATORIES

SFD-10-01-

L007

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E-7421-B (6-75)
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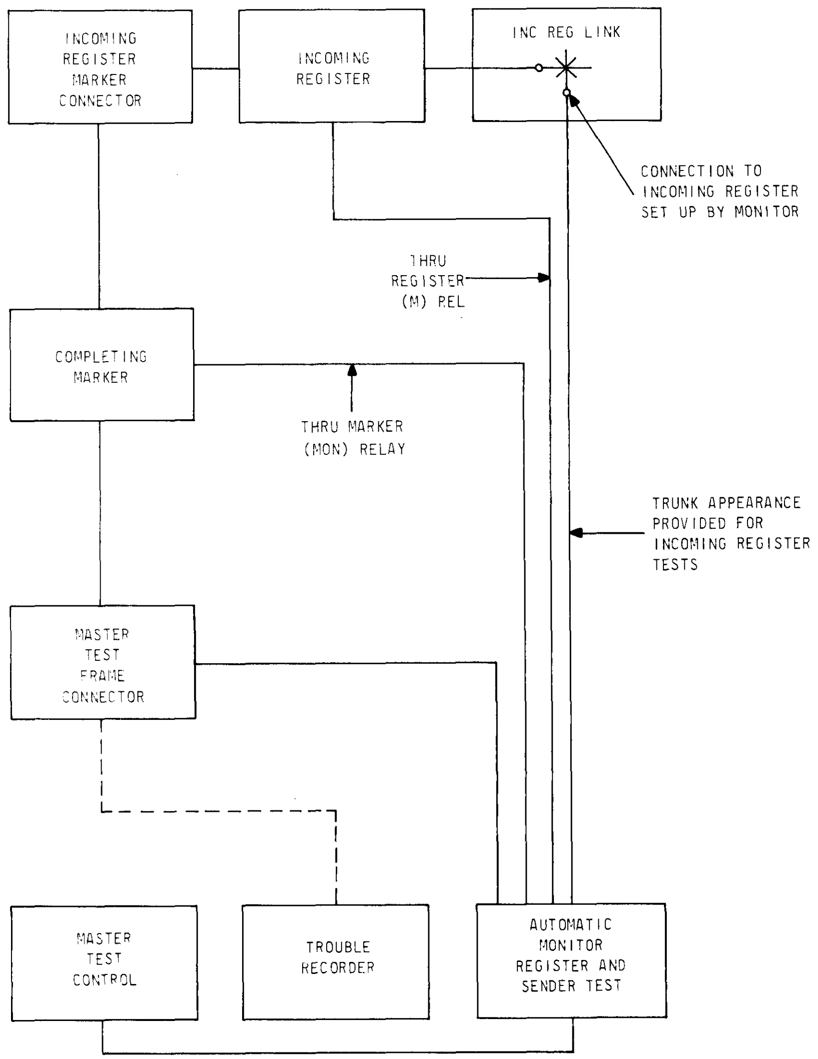
INCOMING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR


INCOMING REGISTER MARKER CONNECTOR
INCOMING REGISTER
INC REG LINK
CONNECTION TO INCOMING REGISTER SET UP BY MONITOR
THRU REGISTER (M) REL
COMPLETING MARKER
THRU MARKER (MON) RELAY
TRUNK APPEARANCE PROVIDED FOR INCOMING REGISTER TESTS
MASTER TEST FRAME CONNECTOR
MASTER TEST CONTROL
TROUBLE RECORDER
AUTOMATIC MONITOR REGISTER AND SENDER TEST

BSP-218-143-501, ISS 8 (MF)
BSP-218-137-501, ISS 6 (DP)

SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25680-01 AUTOMATIC MONITOR, REGISTER AND SENDER TEST CIRCUIT (AMRST)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.
4. KEY(S) OR SWITCH(ES) LOCATED ON AMRST PANEL.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	75	IR KEY	INCOMING REGISTER TEST CLASS OPERATED DIRECTS THE TEST CIRCUIT TO CONNECT TO THE AUTOMATIC MONITOR, REGISTER AND SENDER TEST CIRCUIT, WHICH CONNECTS TO THE INCOMING REGISTER UNDER TEST.
	74	TSTA SW (IR)	
1,2	ZVP, 11	IC KEY (OA/OB)	INCOMING CLASS OPERATED CONTROLS THE INCOMING CLASS TRANSMITTED TO THE INCOMING REGISTER UNDER TEST AND ALSO PROVIDES A CHECK OF CLASS INFORMATION PASSED FROM THE IR THROUGH THE IRMC, CM AND MTFC TO THE AUTOMATIC MONITOR.
	CY, 11	IC SW (OA/OB)	
	NQ, 11	TCL SW (0-10)	
		TCL SW (INC)	
		TRNC SW (OA/OB)	
		CL SW (TCA/TCB)	
1,2	4,KX, KY	A-D (0-9) KEY	DIGITS (A-D) SELECTS DIGITS TO BE PULSED INTO INCOMING REGISTER BY MONITOR.
	4,ZVL ZVM	A-D SW (0-9)	
1,2, 4		IG (0-14) KEY	INCOMING REGISTER GROUP OPERATED TO SELECT AN INCOMING REGISTER LINK GROUP FOR TEST.
		IRG-SEL SW (0-14)	
		IRG-SEL SW (0-9)	
		IRGT KEY	
1,2, 4		SRS (0-9) KEY	SENDER OR REGISTER SELECTION SELECTS A PARTICULAR INCOMING REGISTER FOR TEST.
		SRS SW (0-9)	
1,4		MAC KEY	MONITOR AC OPERATED TO ENERGIZE THE FILAMENTS OF THE AMRST VACUUM TUBES.
1,4		STT KEY	START TEST OPERATED TO CONDITION THE AMRST CIRCUIT FOR THE START OF TESTING.
1,4		SURGE KEY	SURGE PROVIDES FOR TESTING THE DIAL PULSE REGISTER CIRCUIT ON A SURGE HOLD CONDITION. (DP ONLY)
		STP KEY	START PULSE OPERATED TO CHECK THE MF REGISTER FOR A PREMATURE START PULSE. (MF ONLY)
3	3	REP KEY	REPEAT KEY CAUSES A TEST CALL TO A REGISTER TO BE REPEATED AFTER SUCCESSFUL CHECK BY THE AUTOMATIC MONITOR.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.

ISSUE
5

SFD-10-01-L008

TEST SET UP
INCOMING REGISTER (IR) TEST

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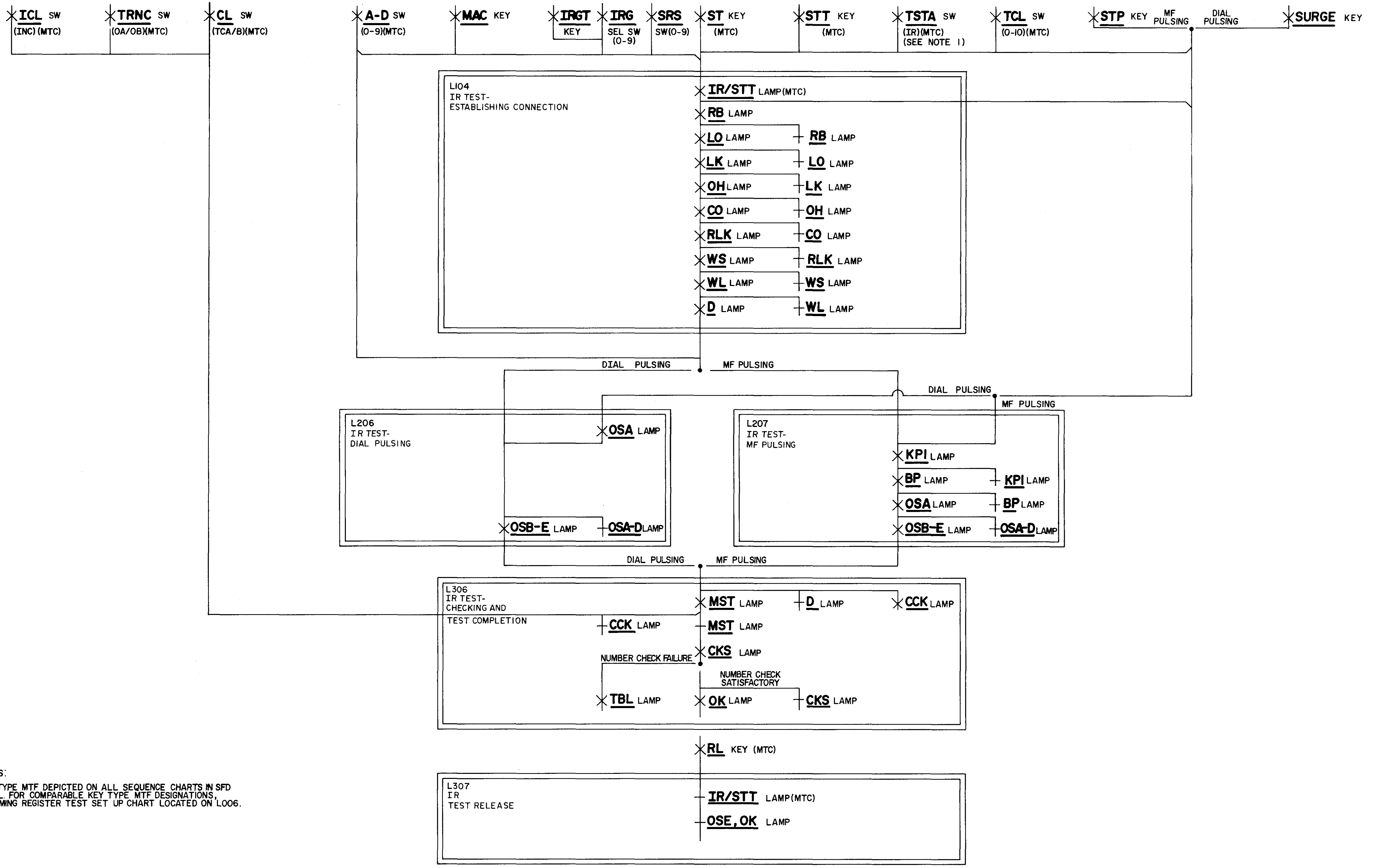

SHEET NOTES:

1. SWITCH TYPE MTF DEPICTED ON ALL SEQUENCE CHARTS IN SFD SECTION L. FOR COMPARABLE KEY TYPE MTF DESIGNATIONS, SEE INCOMING REGISTER TEST SET UP CHART LOCATED ON L006.

ISSUE 5

SEQUENCE CHART
TEST ANALYSIS
INCOMING REGISTER (IR) TEST

SFD-10-01-L009

BELL TELEPHONE LABORATORIES INCORPORATED

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E-7481-B (10-71)

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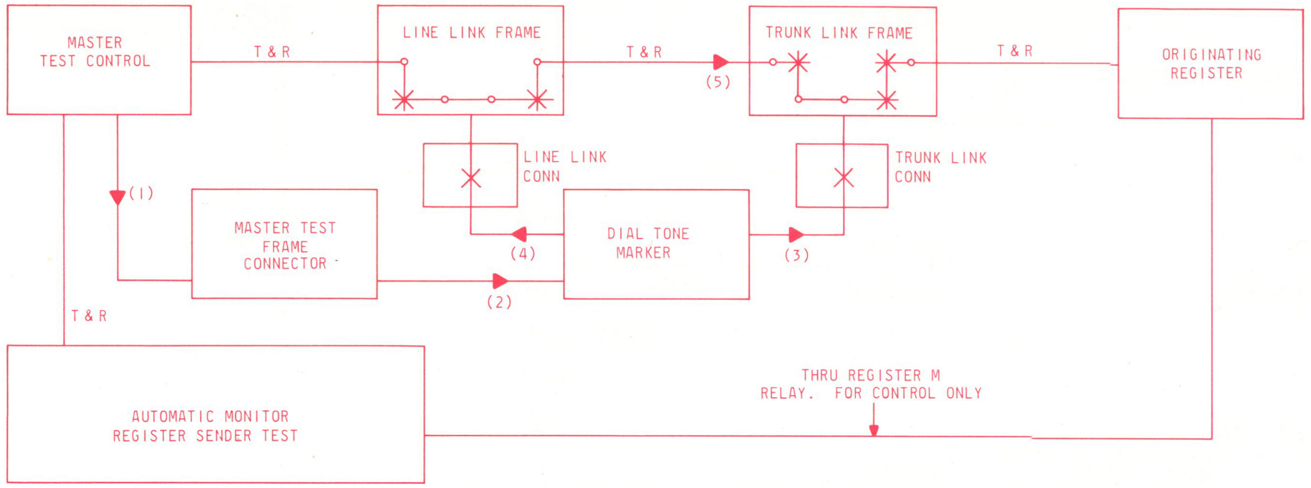
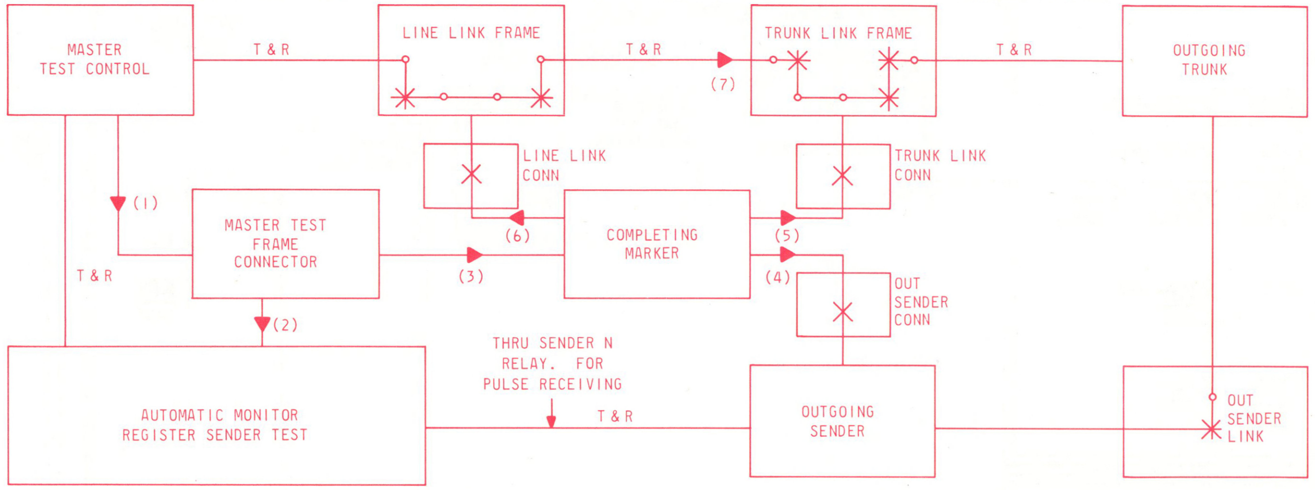
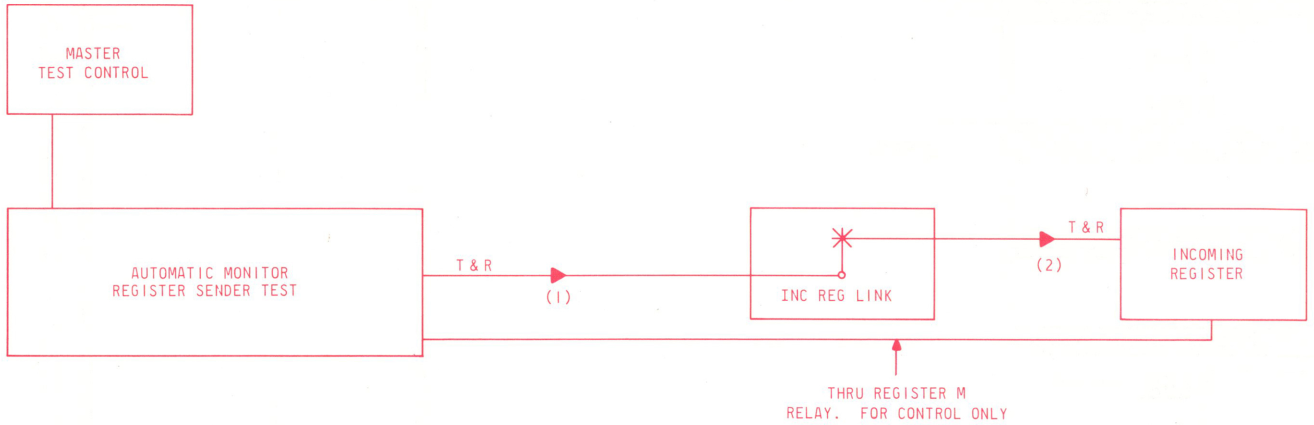
ORIGINATING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR



SENDER CLASS OF TEST USING AUTOMATIC MONITOR



INCOMING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR


MASTER TEST CONTROL
AUTOMATIC MONITOR REGISTER SENDER TEST
T & R
(1)
INC REG LINK
T & R
(2)
INCOMING REGISTER
THRU REGISTER M RELAY. FOR CONTROL ONLY

INDEX

PAGE NO.	TITLE
L101	PART LI - ESTABLISHING CONNECTION
L102	SEQUENCE CHART - OR TEST - ESTABLISHING CONNECTION
L103	SEQUENCE CHART - SDR TEST - ESTABLISHING CONNECTION
L104	SEQUENCE CHART - SDR TEST - ESTABLISHING CONNECTION
L105	SEQUENCE CHART - IMS TEST - ESTABLISHING CONNECTION
L106	SEQUENCE CHART - IR TEST - ESTABLISHING CONNECTION
L107	TYPE OF REGISTER, SENDER
L108	REGISTER, SENDER TEST CONTROL
L109	REGISTER, SENDER TEST CONTROL
L110	INCOMING REGISTER PREFERENCE AND SELECTION
L111	REGISTER CONTROL
L112	INCOMING REGISTER CONTROL
L113	INCOMING REGISTER CONTROL
L114	INCOMING REGISTER TESTS - T & R CONTROL
L115	IR WINK TEST
L116	DIGIT REGISTRATION - INPUT TO REGISTER
L117	SENDER CONTROL
L118	SENDER TEST - TRUNK LINK CONTROL
L119	SENDER CLASS AND DELETE
L120	LINE LINK IDENTIFICATION SENDER TEST
L121	MTC CONTROL SENDER TEST
L122	DIGIT REGISTRATION - INPUT TO SENDER
L123	DIGIT REGISTRATION - INPUT TO SENDER
L124	SEQUENCE CHART - TIMING
L125	TIMING

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

SFD-10-01-L101
2 SHEETS, SHEET 1

PART LI
ESTABLISHING CONNECTION

SFD-10-01-L101

ISSUE 5

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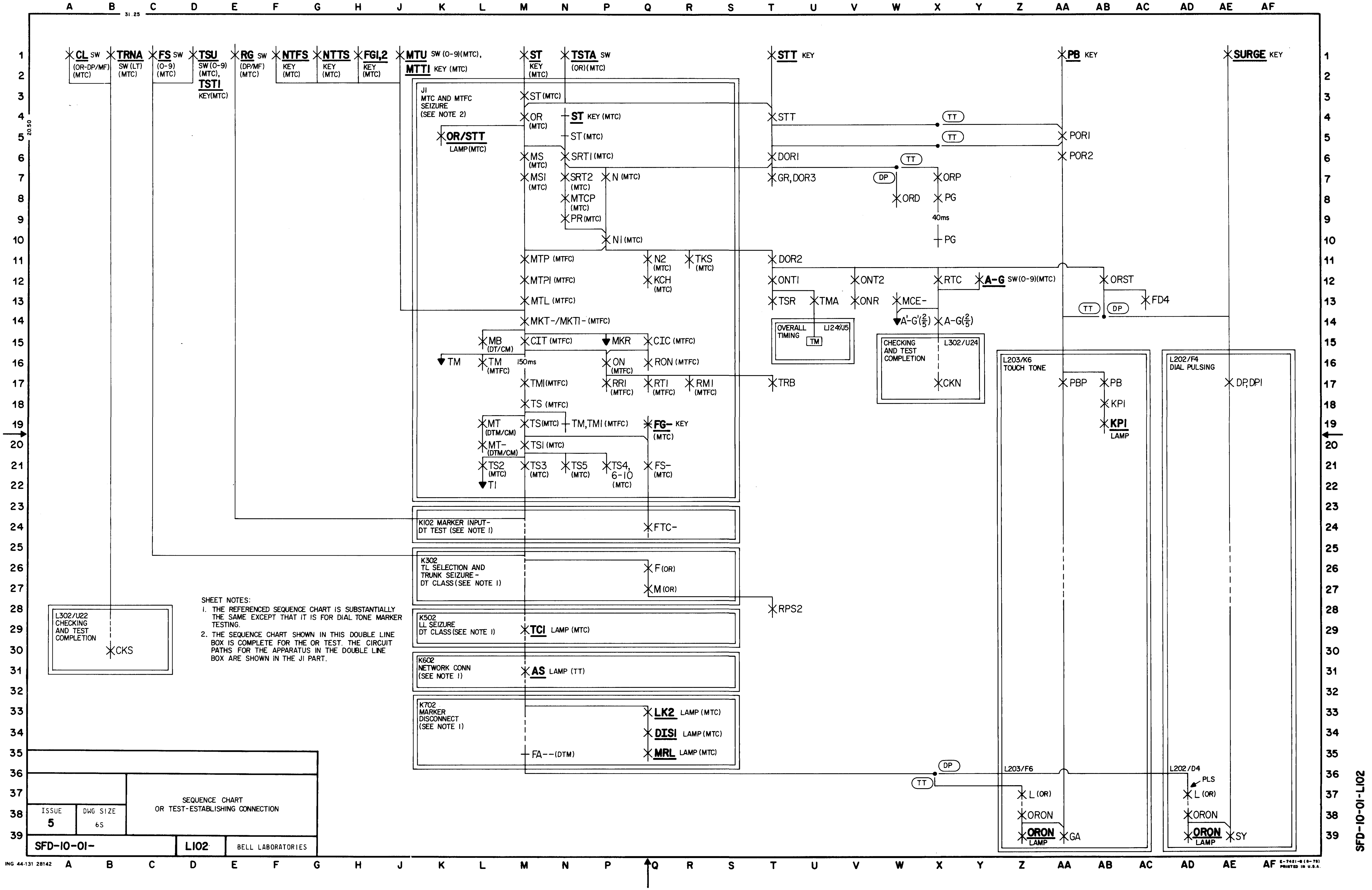


SHEET NOTES:

1. THE REFERENCED SEQUENCE CHART IS SUBSTANTIALLY THE SAME EXCEPT THAT IT IS FOR DIAL TONE MARKER TESTING.
2. THE SEQUENCE CHART SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE OR TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE JI PART.

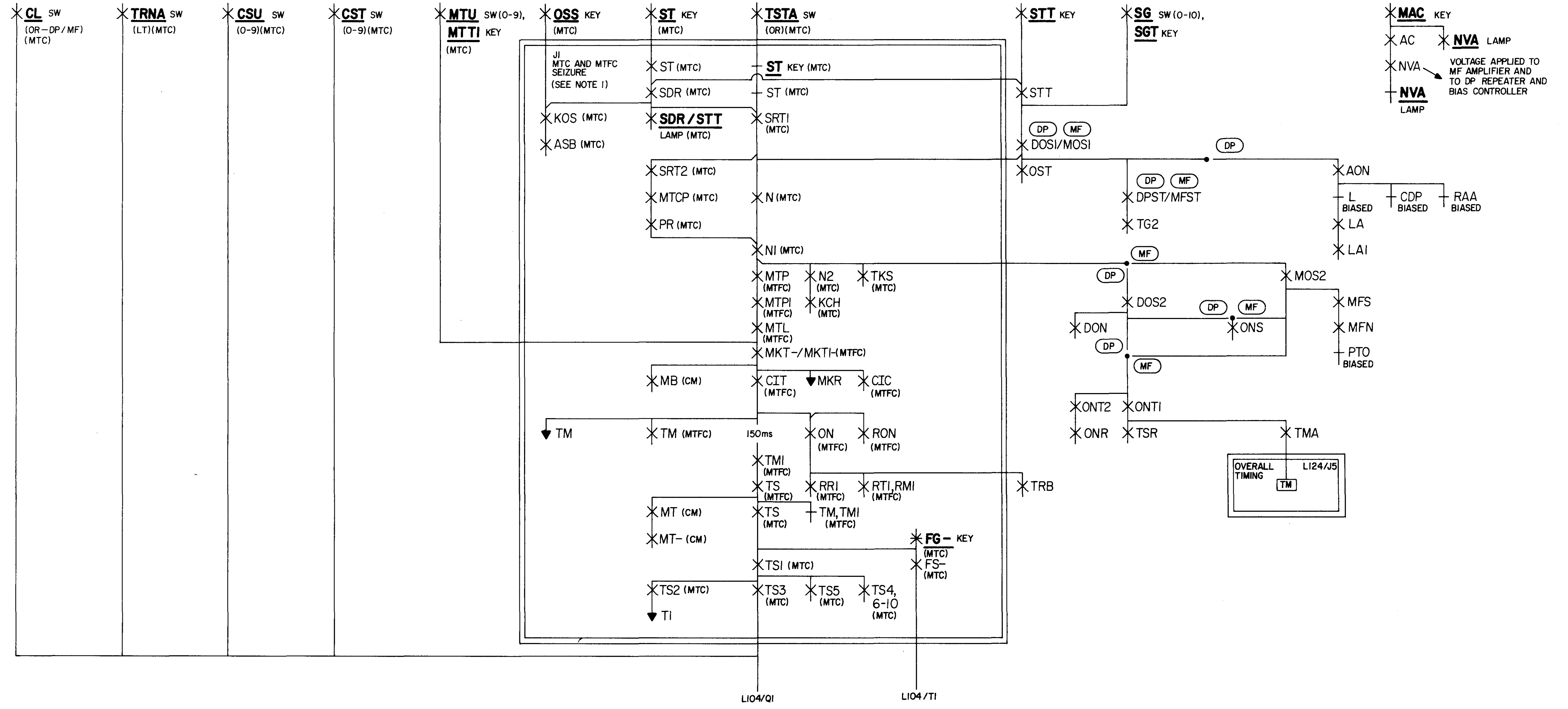
ISSUE	DWG SIZE	
5	6S	SEQUENCE CHART OR TEST-ESTABLISHING CONNECTION

SFD-10-01- L102 BELL LABORATORIES

ING 44-131 28142

E-7421-B (6-79) PRINTED IN U.S.A.

SFD-10-01-L102



SHEET NOTES:

1. THE SEQUENCE CHART SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE SDR TEST. THE CIRCUIT PATHS FOR THE APPARTUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

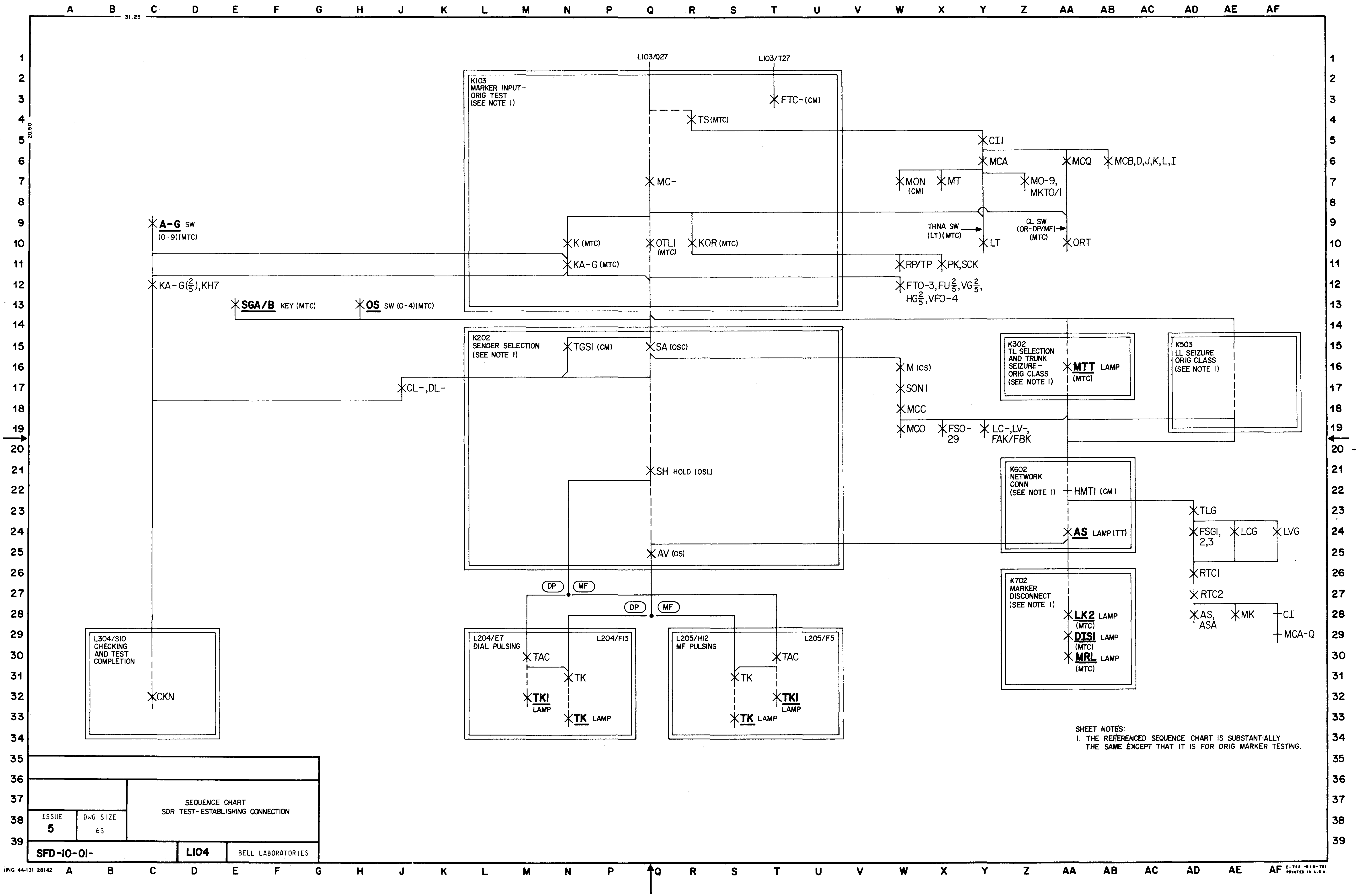
SEQUENCE CHART
SDR TEST-ESTABLISHING CONNECTION

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- L103

BRUNING 44-131 28142

E-7421-B(6-75) PRINTED IN U.S.A.



SHEET NOTES:
1. THE REFERENCED SEQUENCE CHART IS SUBSTANTIALLY THE SAME EXCEPT THAT IT IS FOR ORIG MARKER TESTING.

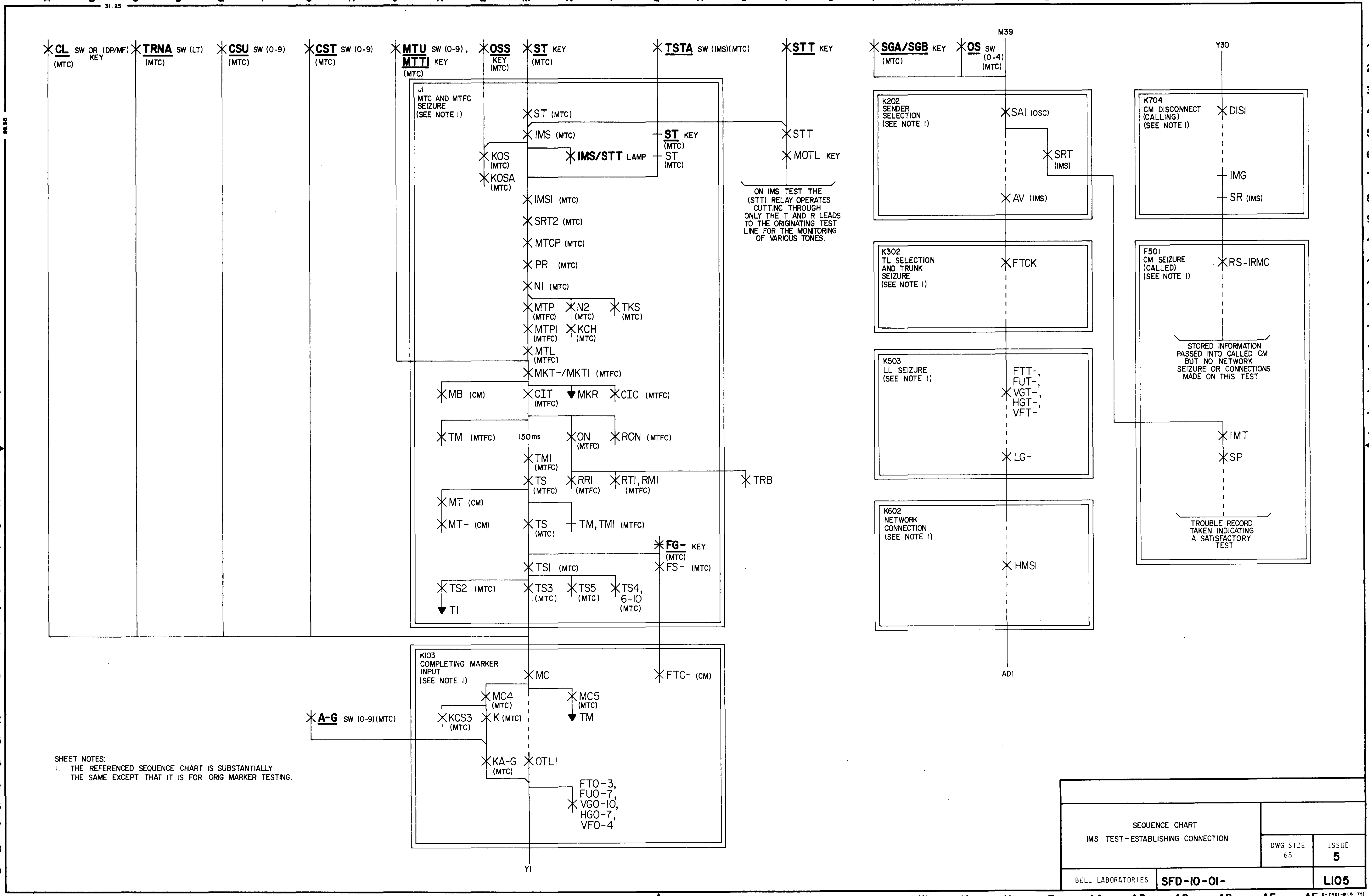
ISSUE	DWG SIZE	
5	6S	SEQUENCE CHART SDR TEST-ESTABLISHING CONNECTION

SFD-10-01- L104 BELL LABORATORIES

SFD-10-01-L104

ING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



SHEET NOTES:
1. THE REFERENCED SEQUENCE CHART IS SUBSTANTIALLY THE SAME EXCEPT THAT IT IS FOR ORIG MARKER TESTING.

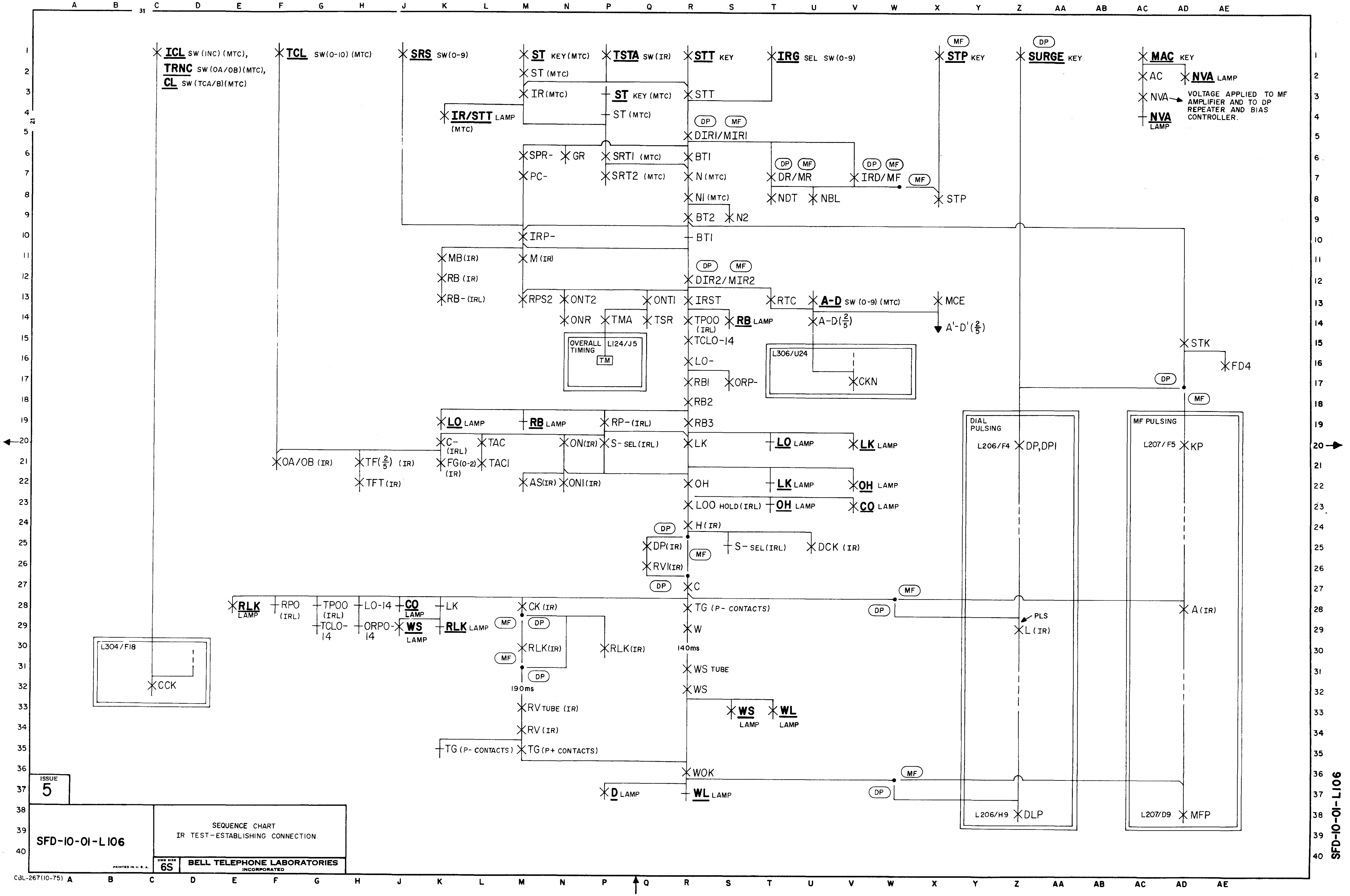
SEQUENCE CHART
IMS TEST-ESTABLISHING CONNECTION

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- L105

E-7421-B (6-75) PRINTED IN U.S.A.

SFD-10-01-L105



ISSUE
5

SFD-10-01-L106

SEQUENCE CHART
IR TEST-ESTABLISHING CONNECTION

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DWG SIZE
6S

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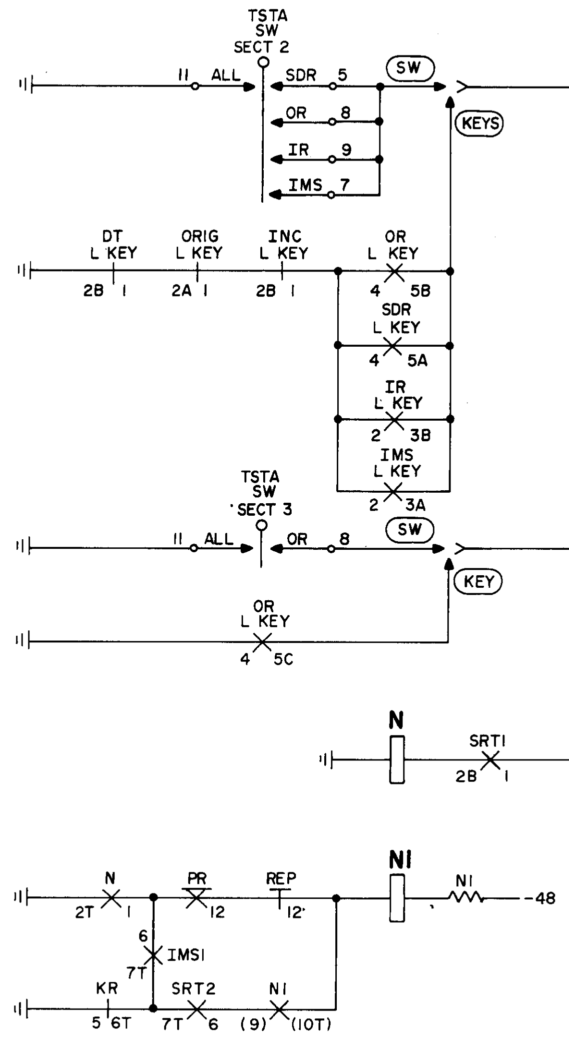
INCORPORATED

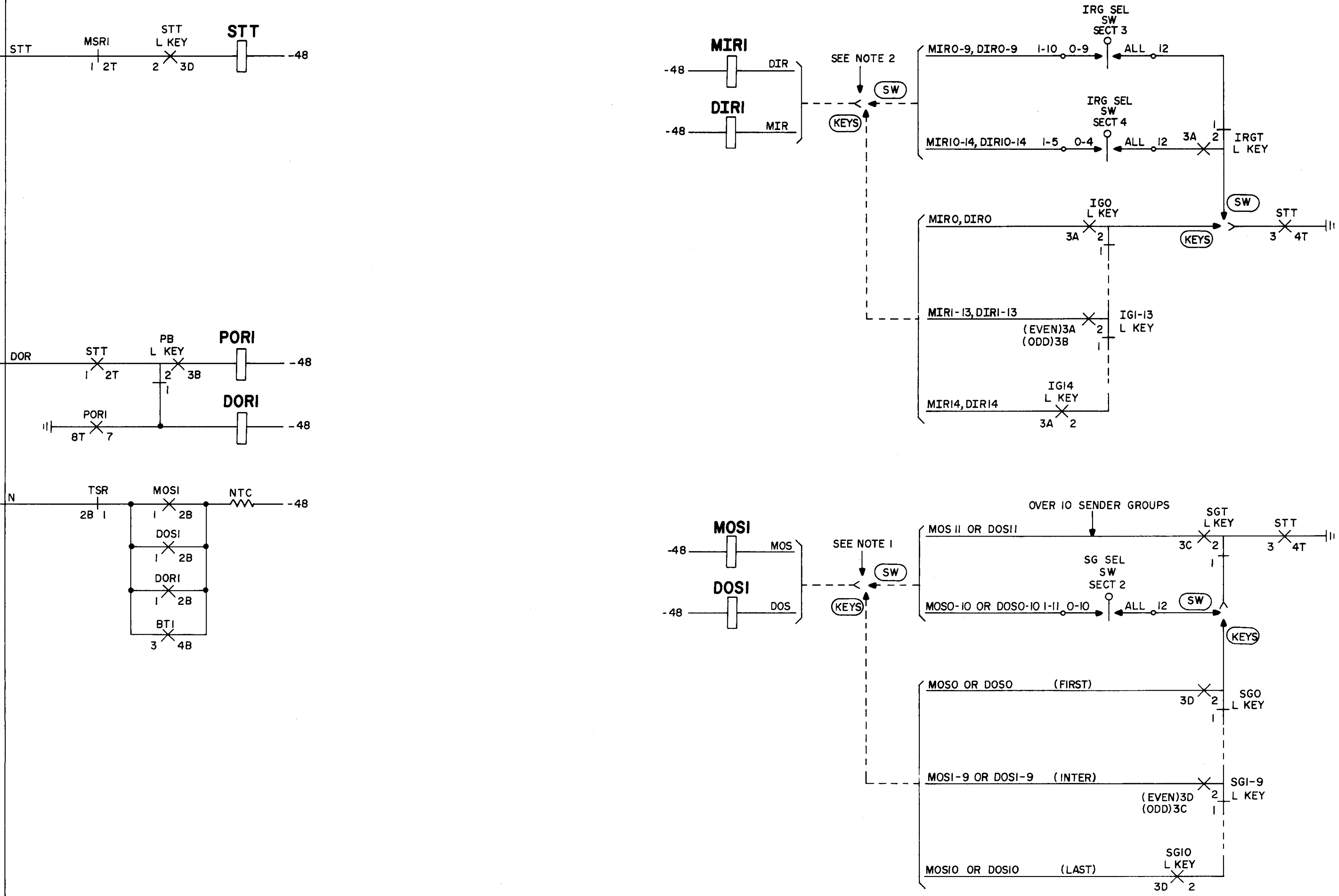
CBL-267 (10-75)

SFD-10-01-L106

MASTER TEST CONTROL



AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. CONNECT MOS (MF OS GROUPS), DOS (DP OS GROUPS) TO MOS-, DOS- RESPECTIVELY.
2. CONNECT MIR (MF IR GROUPS), DIR (DP IR GROUPS) TO MIR-, DIR- RESPECTIVELY.

ISSUE 5

TYPE OF REGISTER, SENDER

SFD-10-01-L107

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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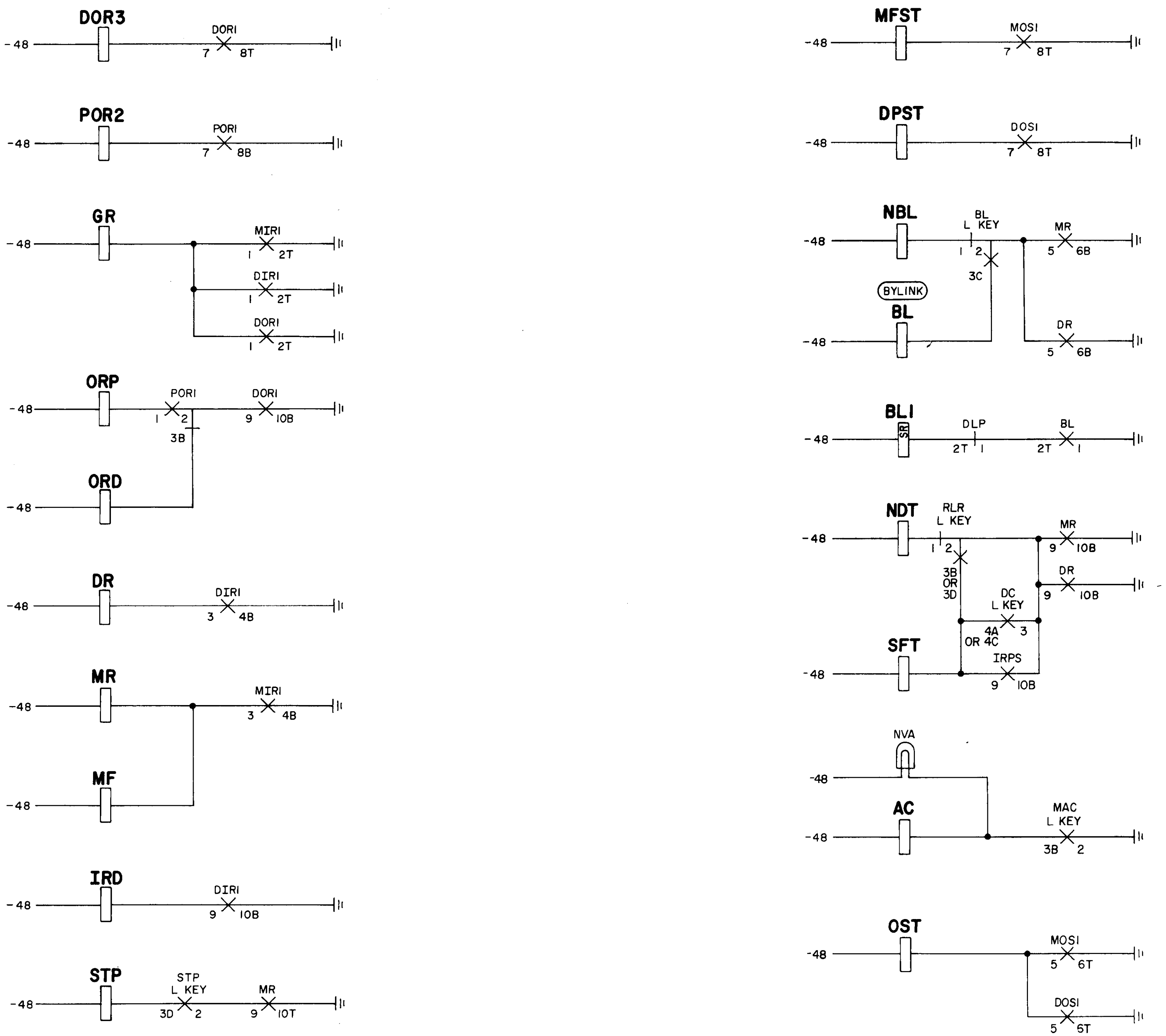
SFD-10-01-L107

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L108

REGISTER, SENDER TEST CONTROL

6S

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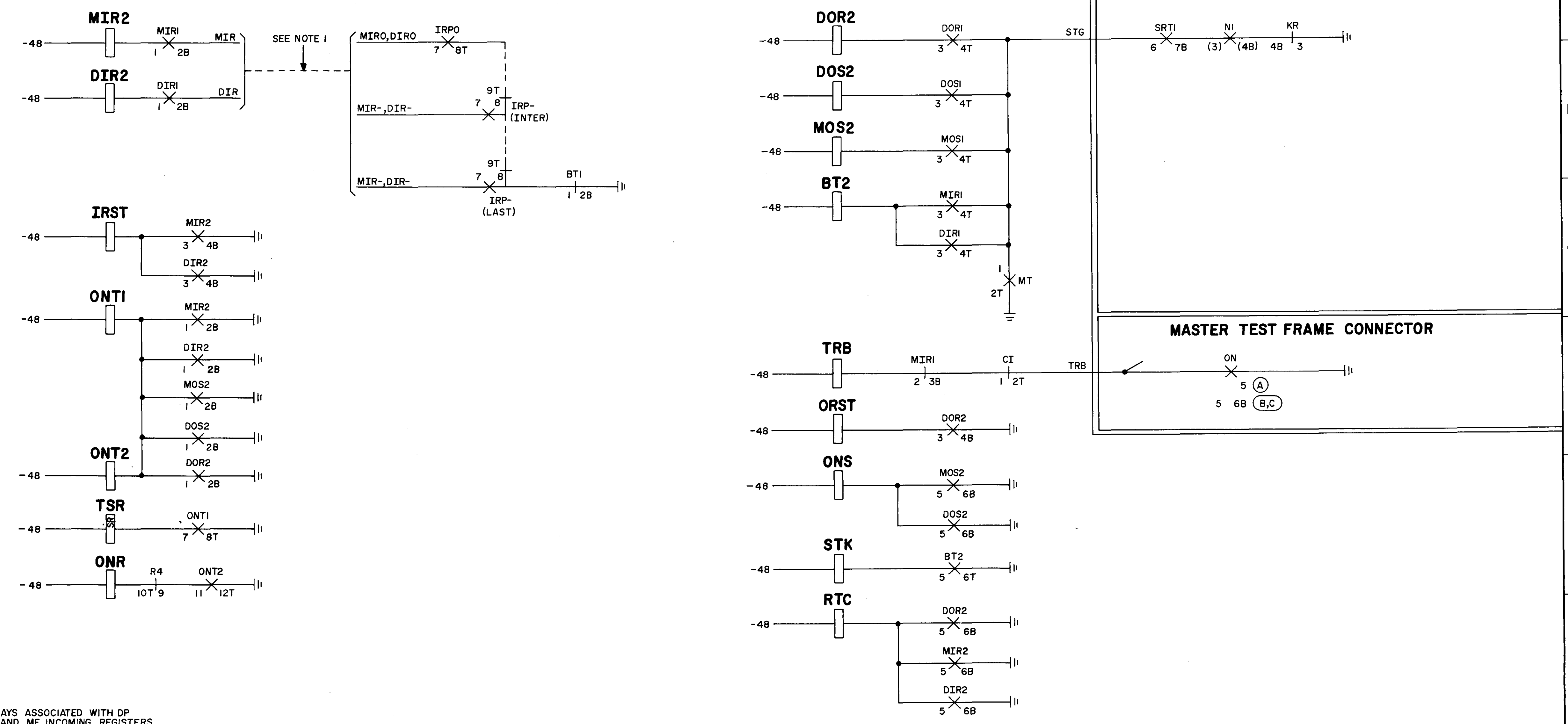
SFD-10-01-L108

AUTOMATIC MONITOR REGISTER SENDER TEST

MASTER TEST CONTROL

MASTER TEST FRAME CONNECTOR



SHEET NOTES:

1. CONNECT 7T(IRP-)RELAYS ASSOCIATED WITH DP INCOMING REGISTERS AND MF INCOMING REGISTERS TO DIR AND MIR RESPECTIVELY.
2. OPTION ASSIGMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

REGISTER, SENDER TEST CONTROL

SFD-10-01-L109

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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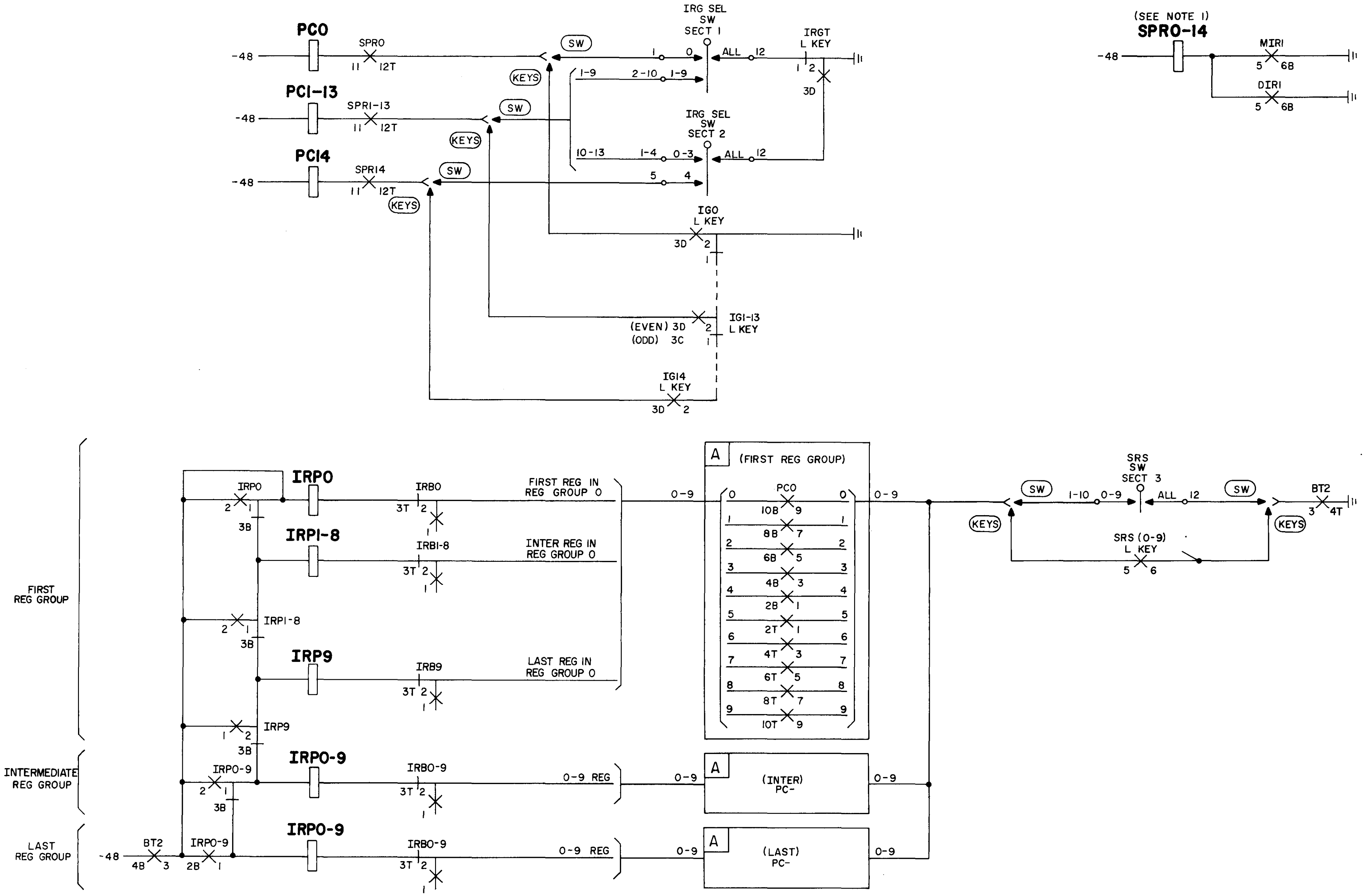
SFD-10-01-L109

E-7481 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. SPRO-14 PER INCOMING REGISTER GROUP EQUIPPED

ISSUE
5

SFD-10-01-L110

INCOMING REGISTER PREFERENCE
AND SELECTION

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
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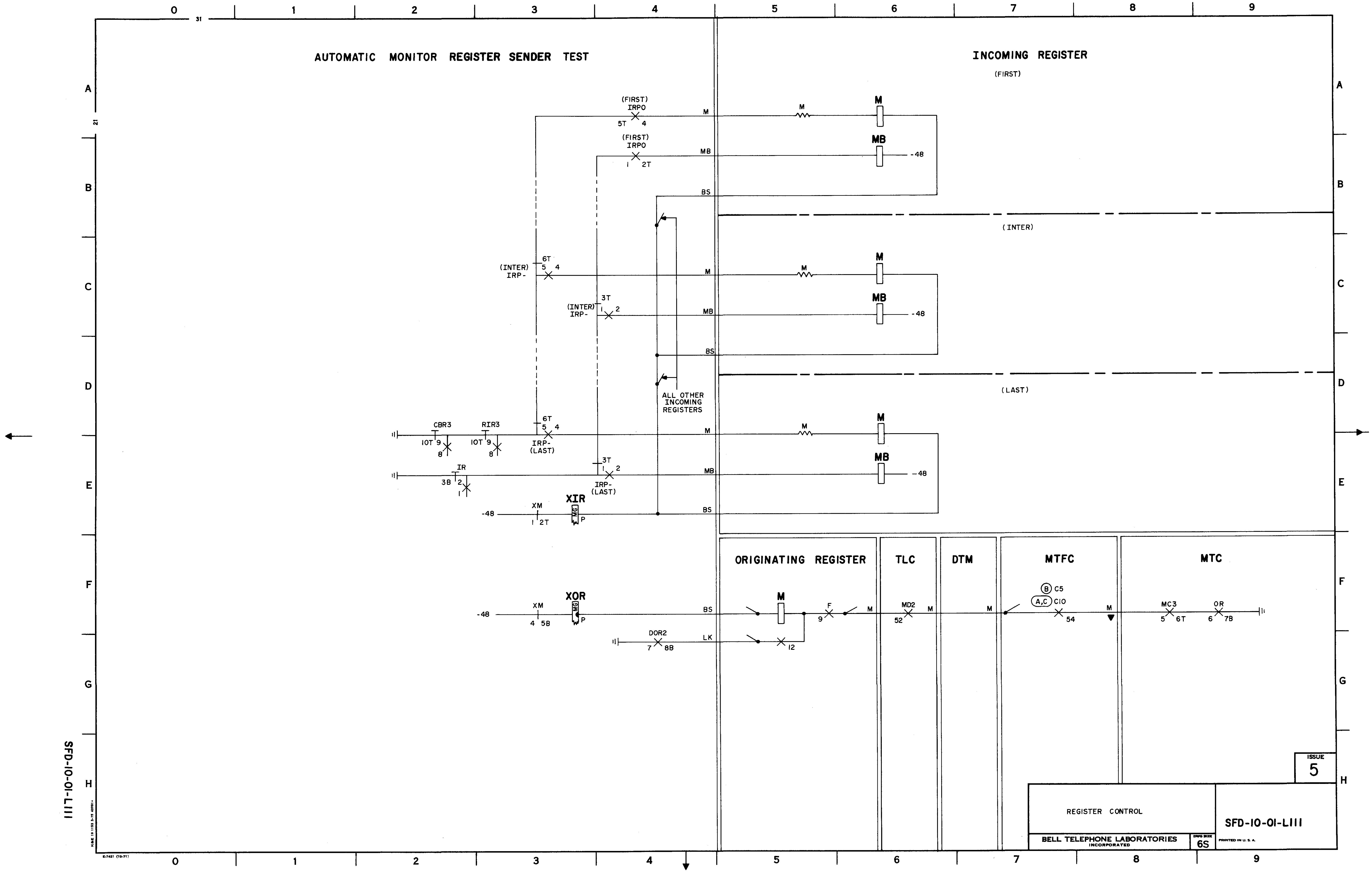
E-7481-L (4-71)

SFD-10-01-L110



ISSUE 5

REGISTER CONTROL

SFD-10-01-L111

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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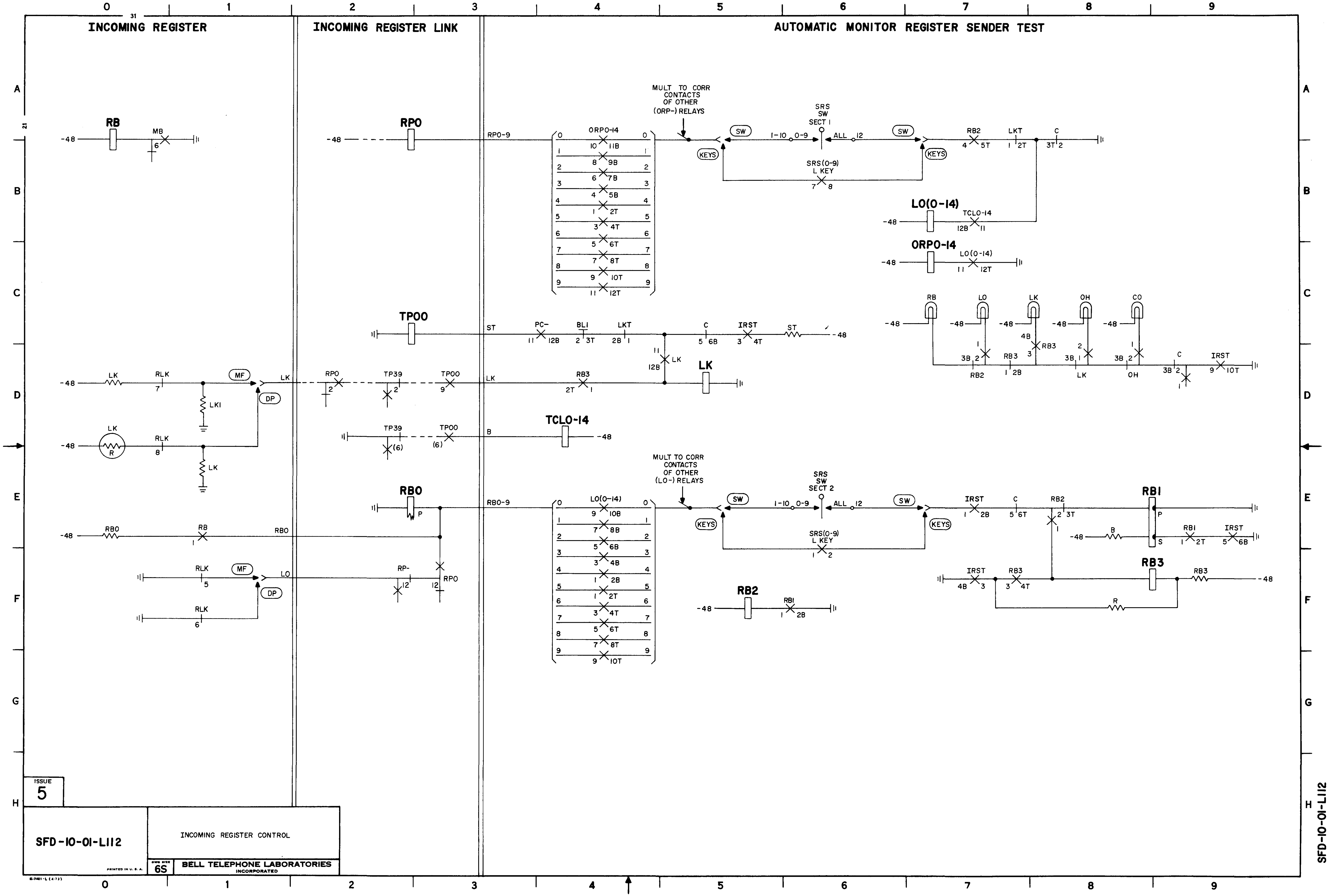
E-7421 (10-71)

SFD-10-01-L111



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SFD-10-01-L112

INCOMING REGISTER CONTROL

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DWG SIZE 6S

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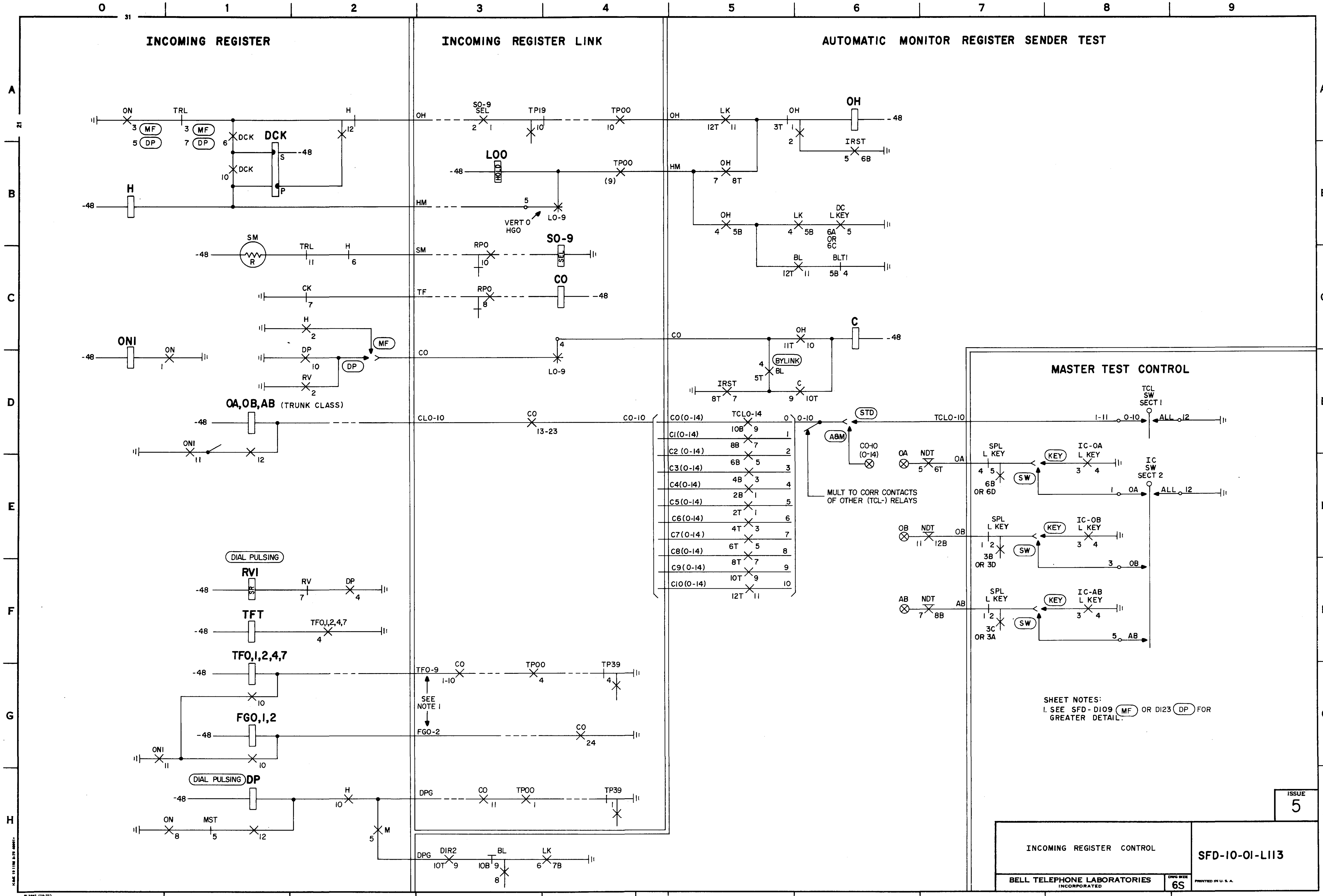
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L112



SHEET NOTES:
1. SEE SFD-D109 (MF) OR D123 (DP) FOR GREATER DETAIL.

ISSUE
5

INCOMING REGISTER CONTROL

SFD-10-01-L113

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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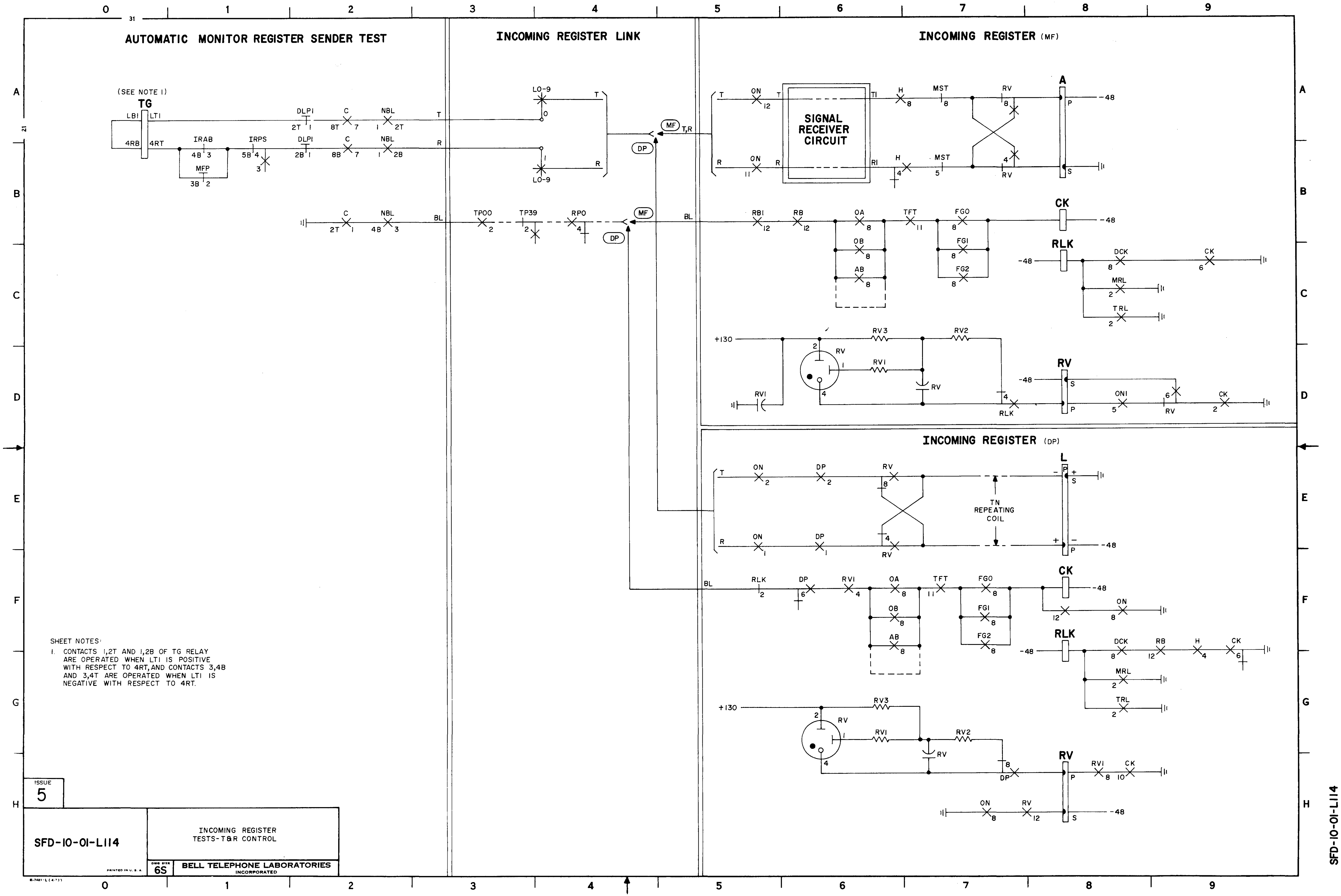
SFD-10-01-L113



SHEET NOTES:

1. CONTACTS 1,2T AND 1,2B OF TG RELAY ARE OPERATED WHEN LT1 IS POSITIVE WITH RESPECT TO 4RT, AND CONTACTS 3,4B AND 3,4T ARE OPERATED WHEN LT1 IS NEGATIVE WITH RESPECT TO 4RT.

ISSUE
5

SFD-10-01-L114

INCOMING REGISTER
TESTS-T&R CONTROL

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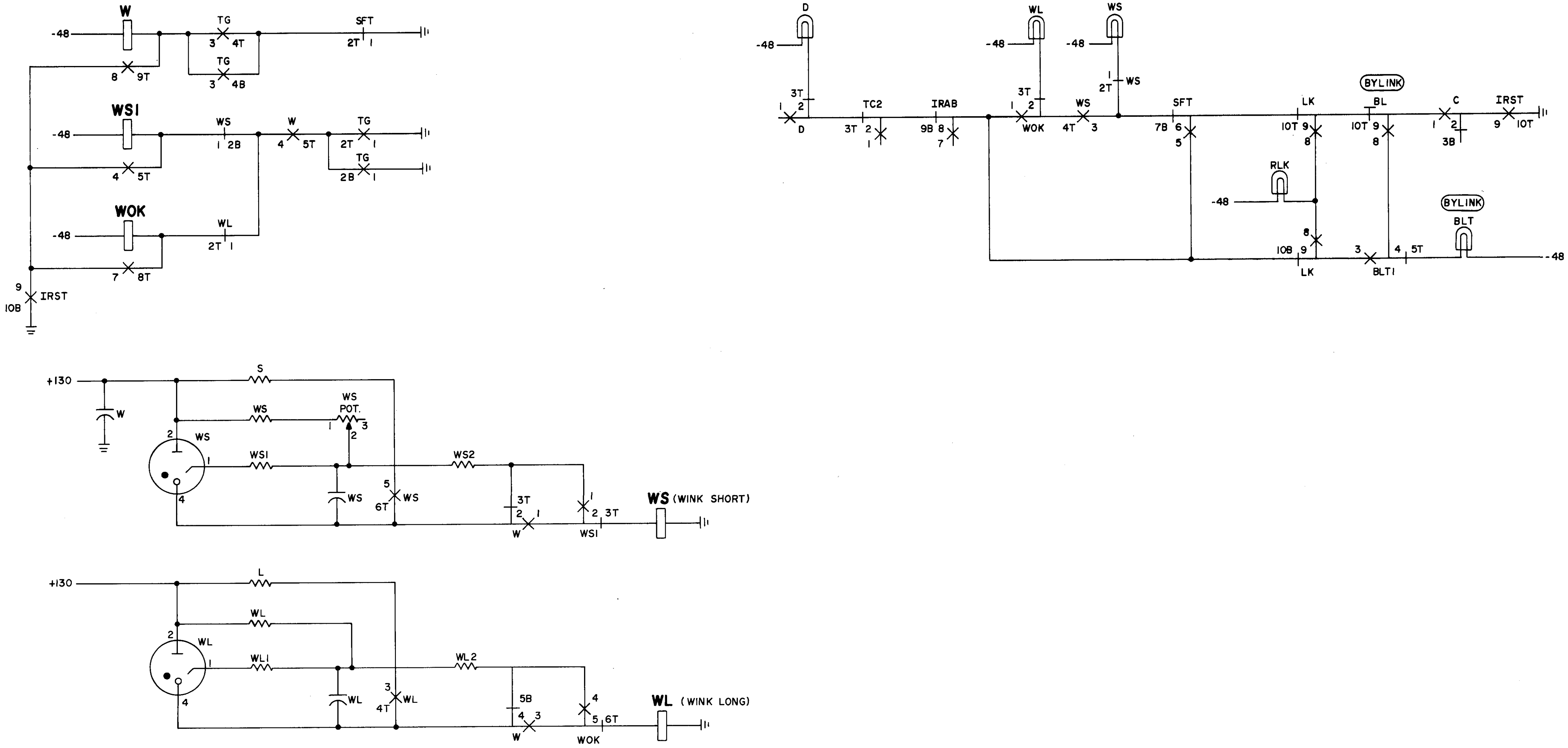
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-L114

AUTOMATIC MONITOR REGISTER SENDER TEST



SFD-10-01-L115

ISSUE 5

IR WINK TESTS

SFD-10-01-L115

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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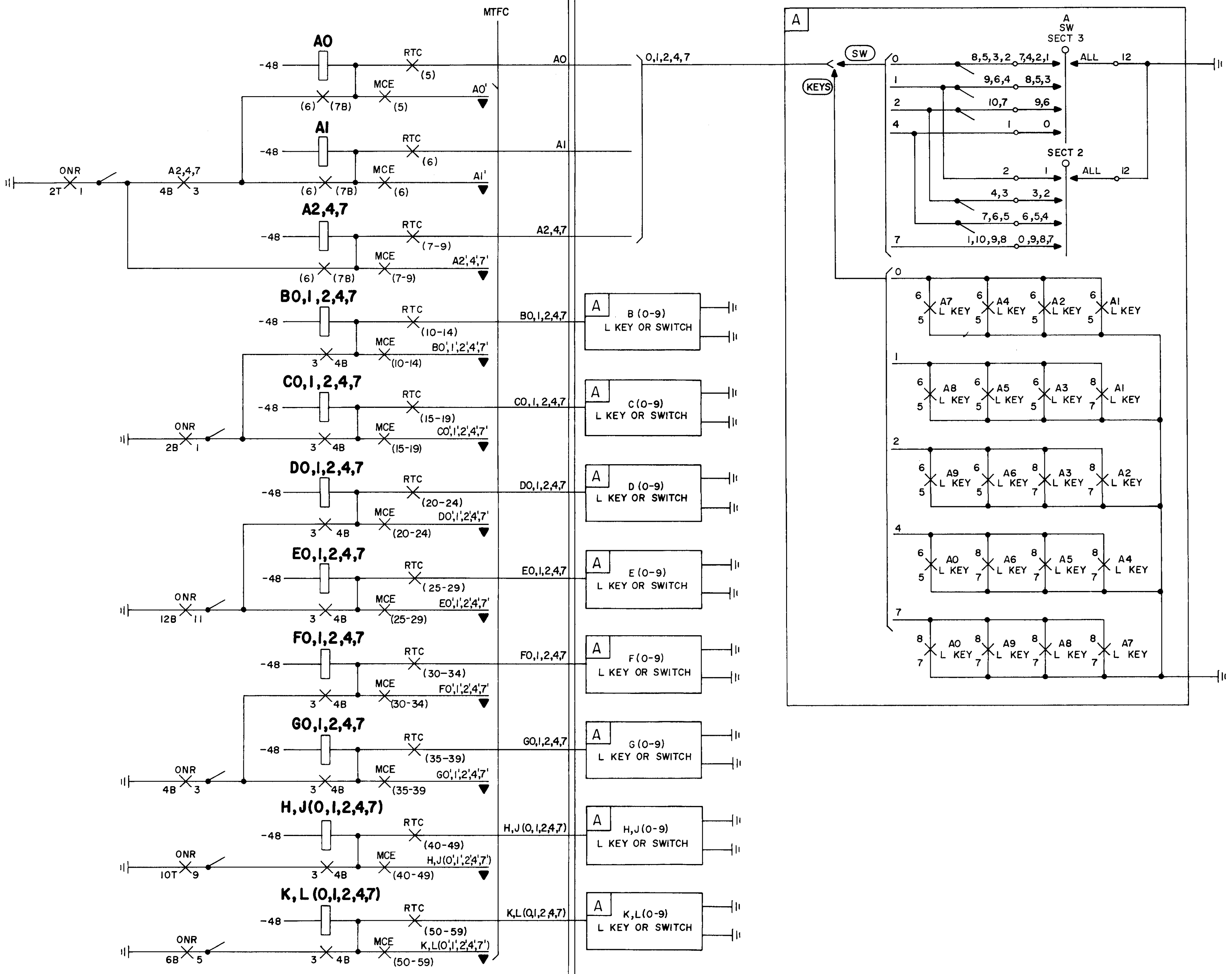
E-7421 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST

MASTER TEST CONTROL



ISSUE
5

SFD-10-01-L116

DIGIT REGISTRATION - INPUT TO REGISTER

DWG SIZE 6S

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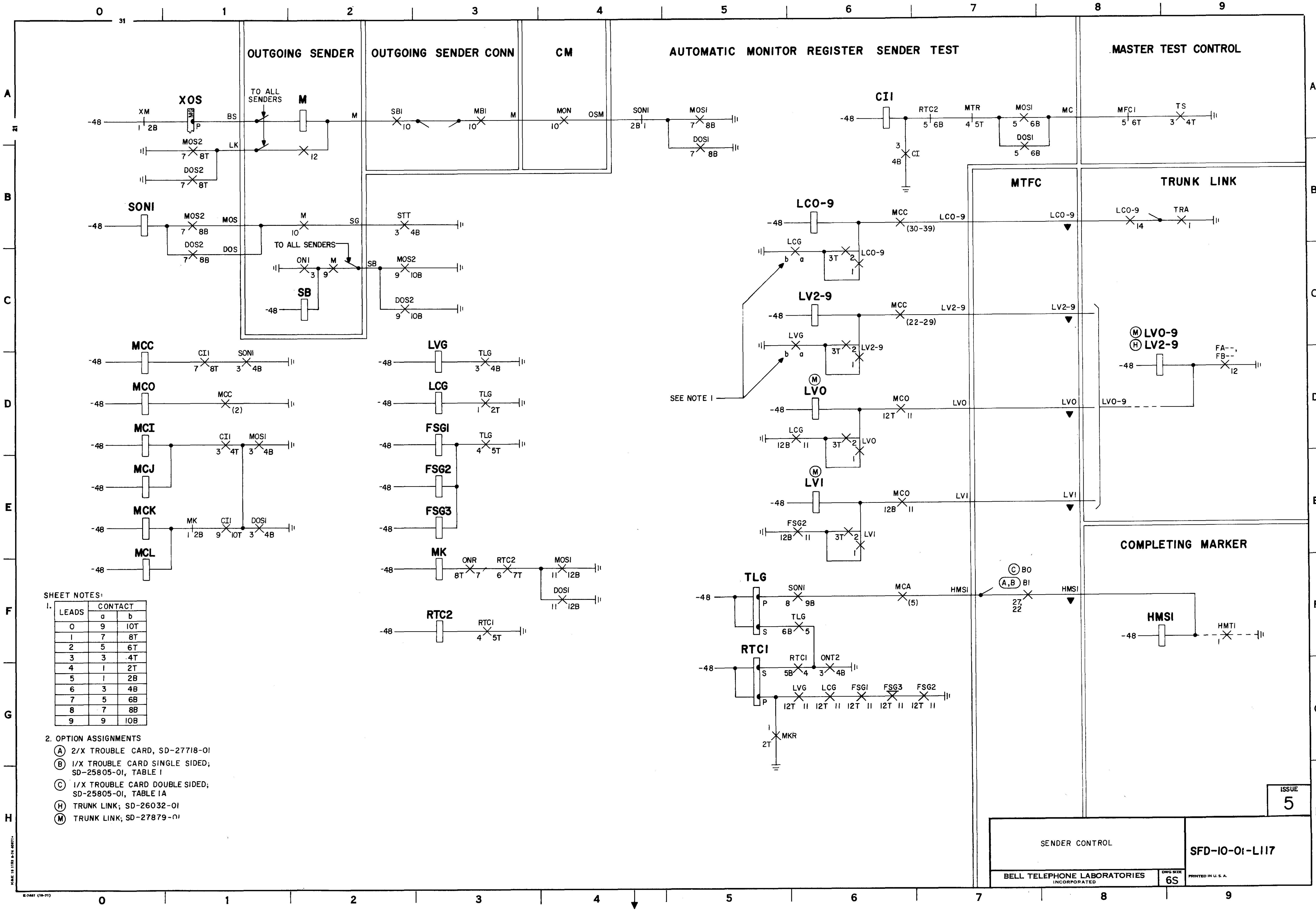
E-7481-L (4-73)

SFD-10-01-L116



SHEET NOTES:

1.

LEADS	CONTACT a	CONTACT b
0	9	10T
1	7	8T
2	5	6T
3	3	4T
4	1	2T
5	1	2B
6	3	4B
7	5	6B
8	7	8B
9	9	10B

2. OPTION ASSIGNMENTS

Ⓐ 2/X TROUBLE CARD, SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

Ⓗ TRUNK LINK; SD-26032-01

Ⓜ TRUNK LINK; SD-27879-01

ISSUE 5

SENDER CONTROL

SFD-10-01-L117

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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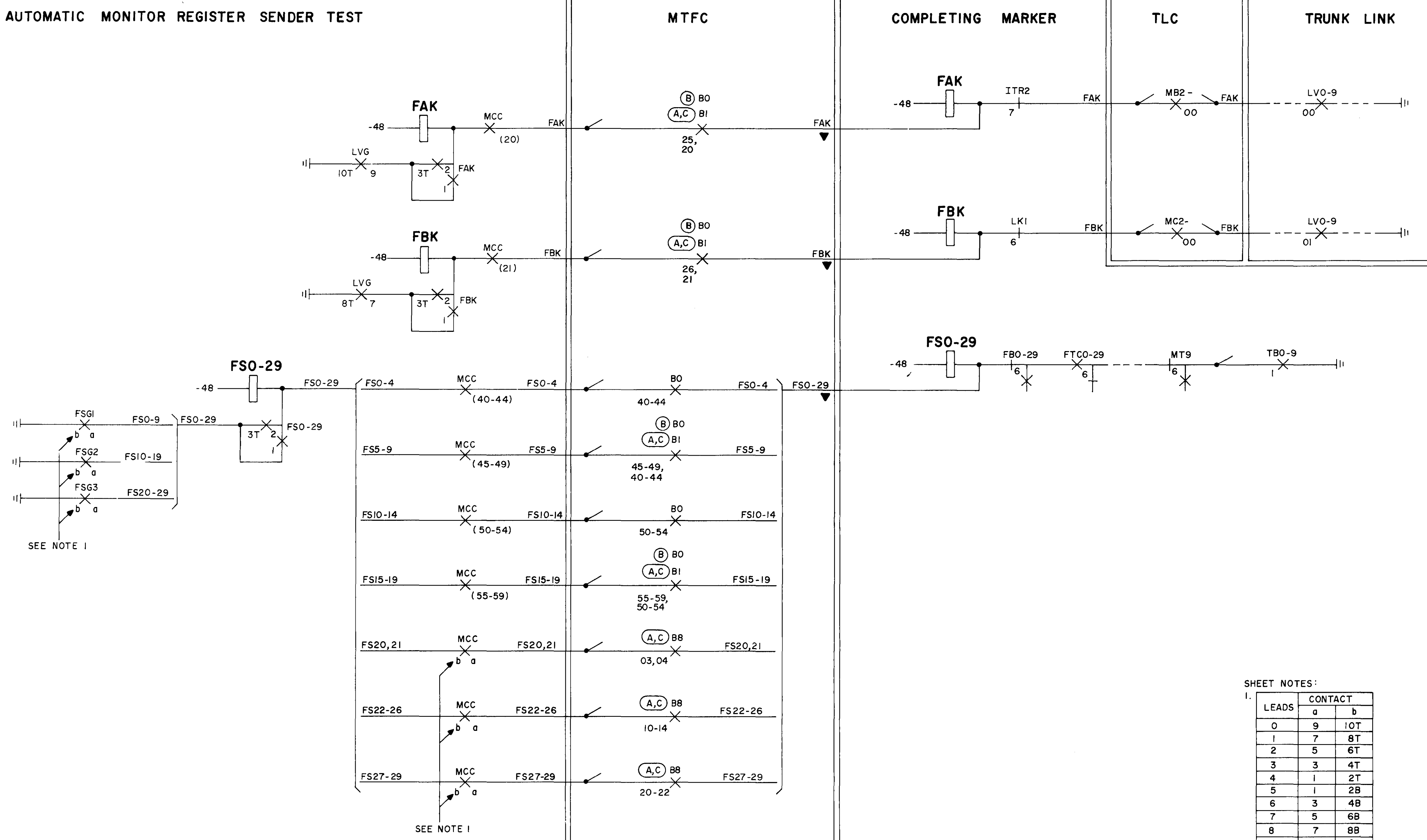
SFD-10-01-L117



SHEET NOTES:

1.

LEADS	CONTACT a	CONTACT b
0	9	10T
1	7	8T
2	5	6T
3	3	4T
4	1	2T
5	1	2B
6	3	4B
7	5	6B
8	7	8B
9	9	10B

2. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-L118

SENDER TEST-TRUNK LINK CONTROL

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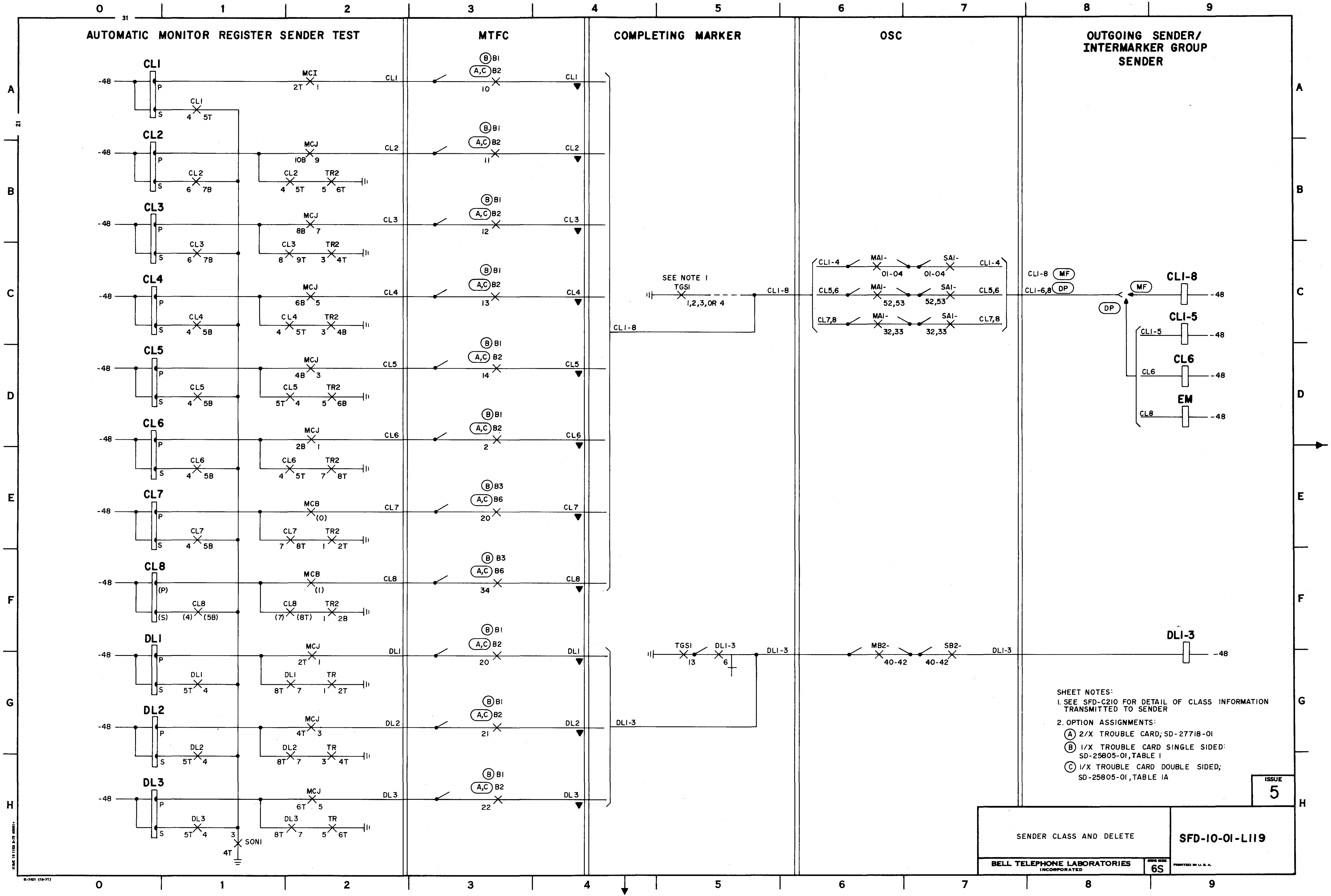
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED



SHEET NOTES:

1. SEE SFD-C210 FOR DETAIL OF CLASS INFORMATION TRANSMITTED TO SENDER
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE 5

SENDER CLASS AND DELETE

SFD-10-01-L119

BELL TELEPHONE LABORATORIES INCORPORATED

6S

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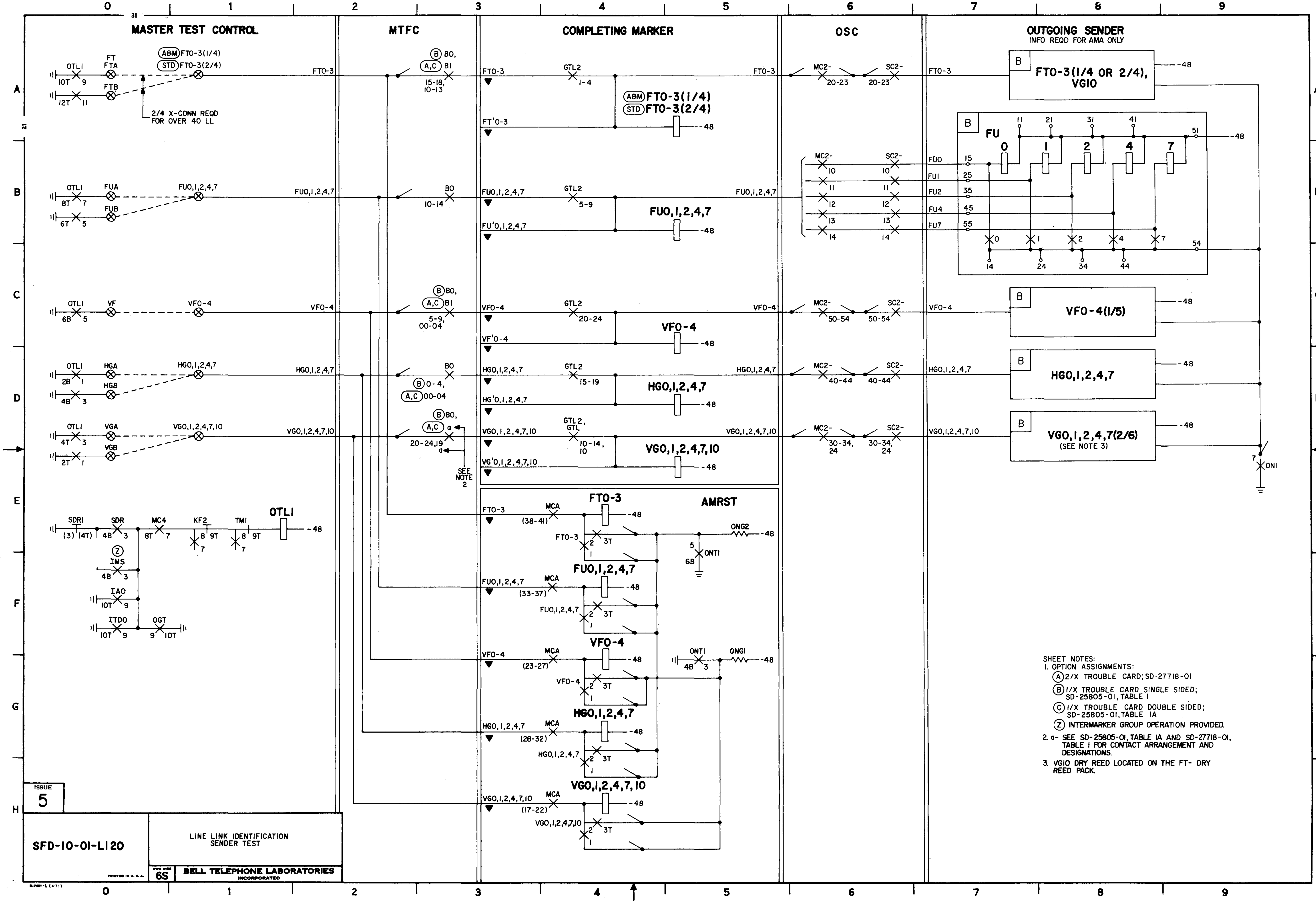
SFD-10-01-L119



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
   - Ⓩ INTERMARKER GROUP OPERATION PROVIDED.
2. a- SEE SD-25805-01, TABLE 1A AND SD-27718-01, TABLE 1 FOR CONTACT ARRANGEMENT AND DESIGNATIONS.
3. VG10 DRY REED LOCATED ON THE FT- DRY REED PACK.

ISSUE 5

SFD-10-01-L120

LINE LINK IDENTIFICATION
SENDER TEST

6S

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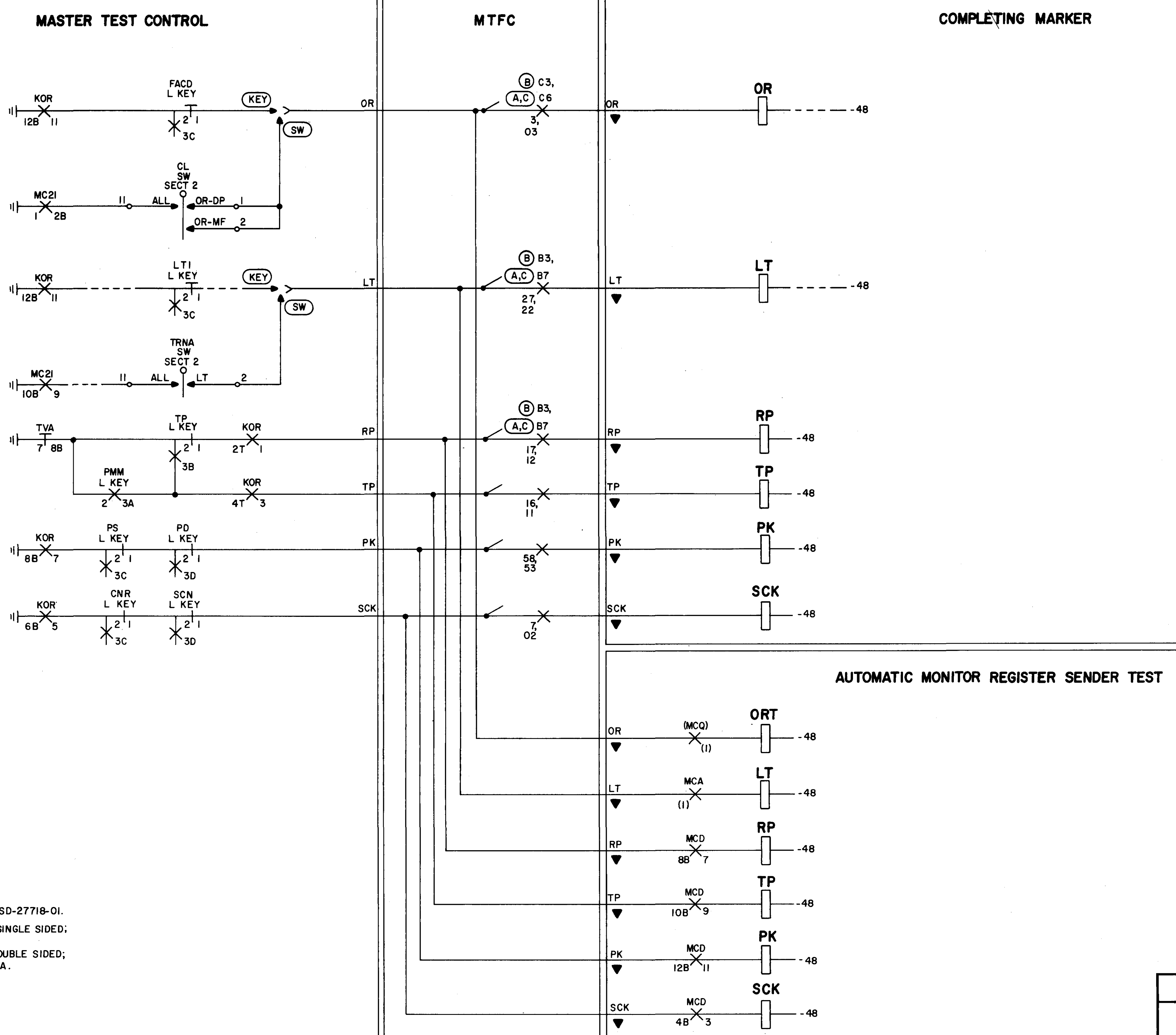
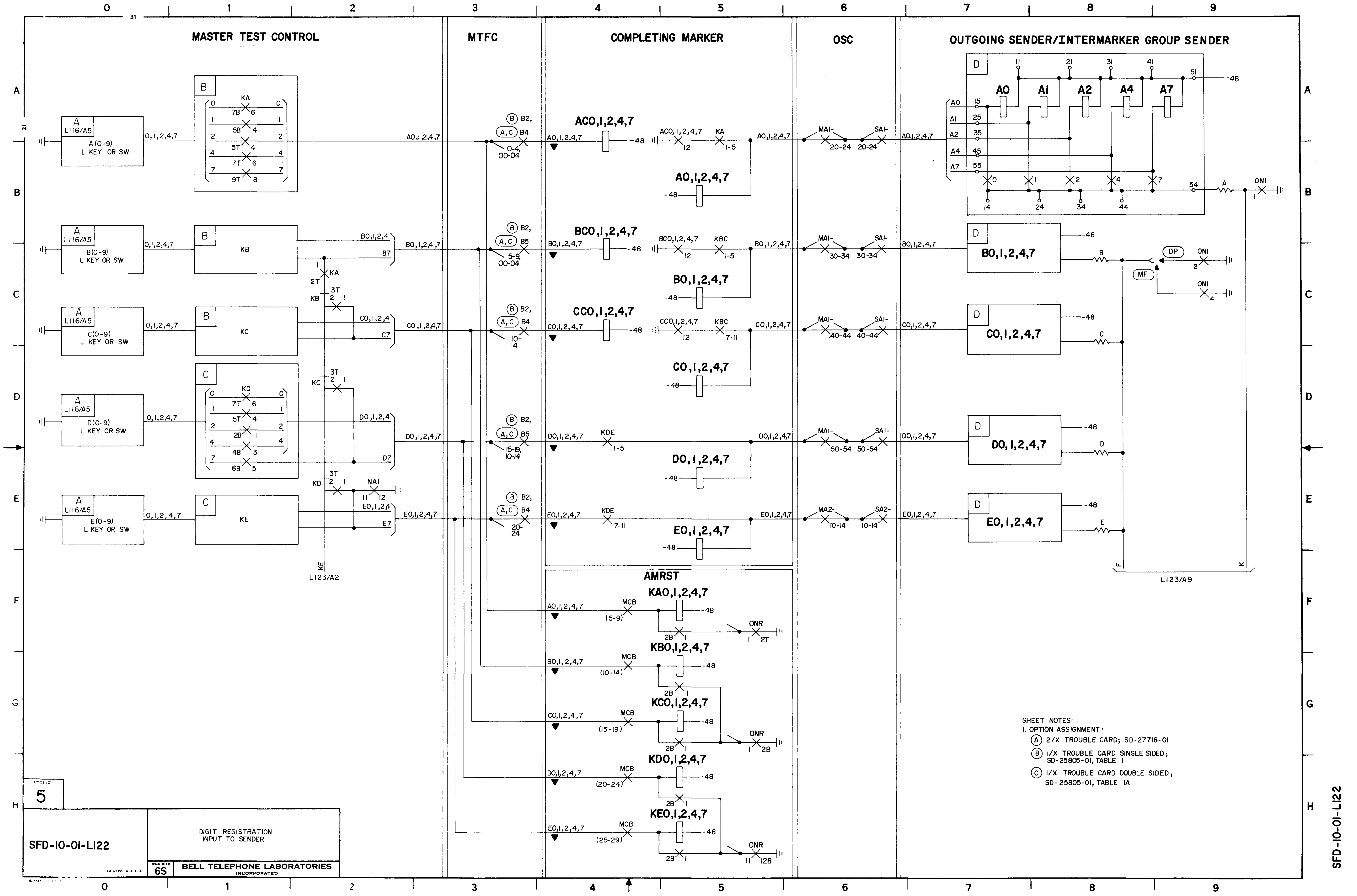
SFD-10-01-L120



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01.
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.

MTC CONTROL SENDER TEST	DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-	L121

SFD-10-01-L121



SHEET NOTES:
1. OPTION ASSIGNMENT:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE 5

SFD-10-01-L122

DIGIT REGISTRATION
INPUT TO SENDER

6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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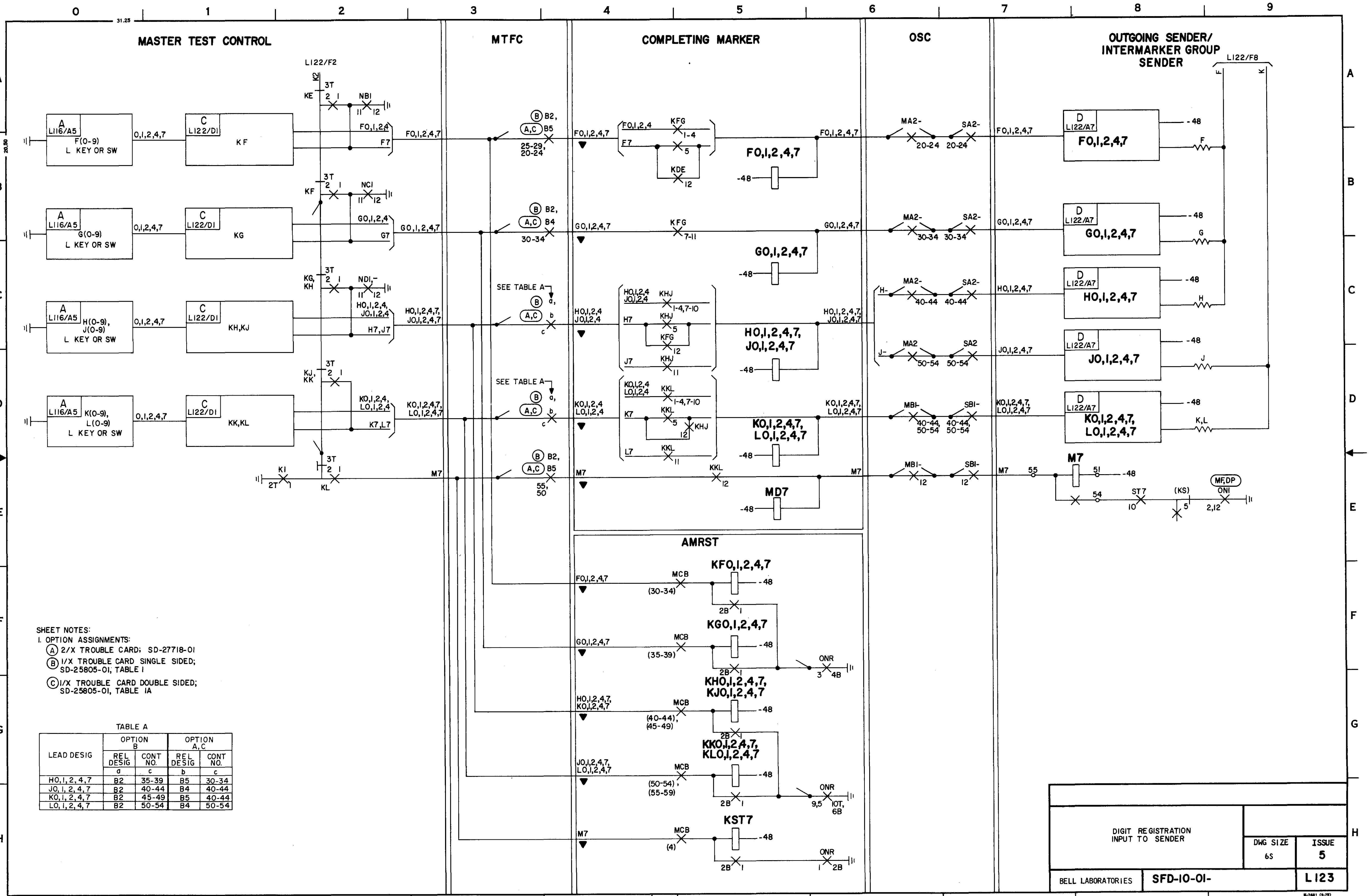

SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

TABLE A

LEAD DESIG	OPTION B		OPTION A,C	
	REL DESIG	CONT NO.	REL DESIG	CONT NO.
	a	c	b	c
H0,1,2,4,7	B2	35-39	B5	30-34
J0,1,2,4,7	B2	40-44	B4	40-44
K0,1,2,4,7	B2	45-49	B5	40-44
L0,1,2,4,7	B2	50-54	B4	50-54

DIGIT REGISTRATION
INPUT TO SENDER

DWG SIZE 6S

ISSUE 5

BELL LABORATORIES

SFD-10-01-

L123

E-7421 (6-75)
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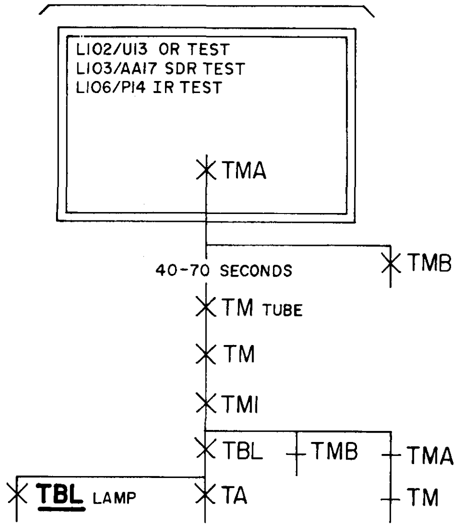
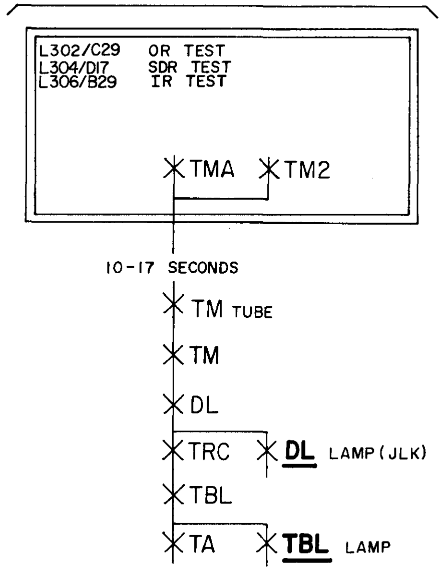
OVERALL TIMING



TROUBLE RECORD TIMING



ISSUE
5

SFD-10-01-L124

SEQUENCE CHART
TIMING

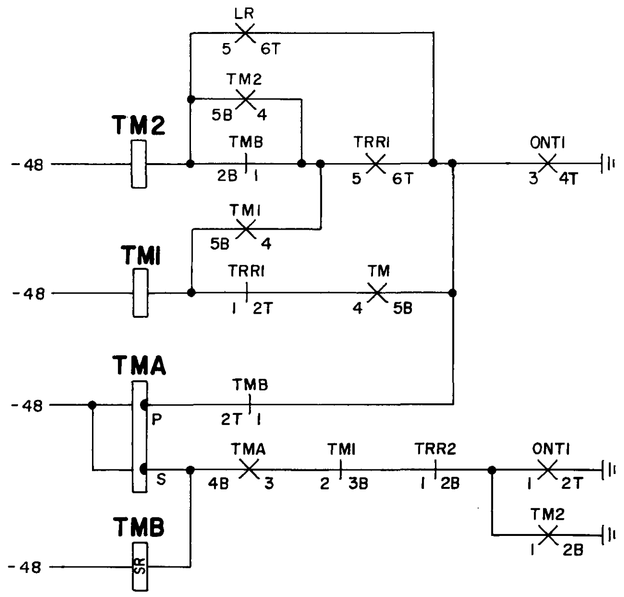
PRINTED IN U.S.A.

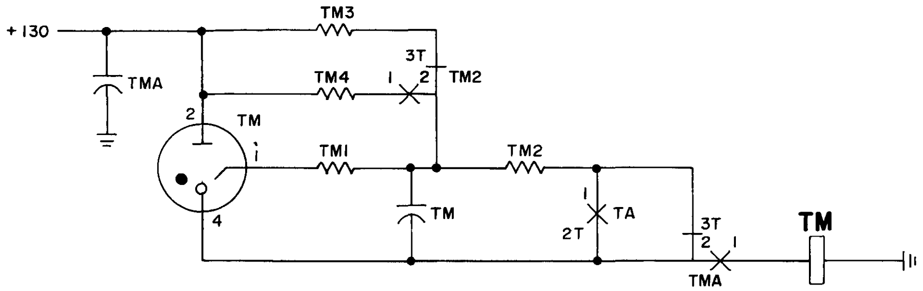
DWG SIZE
6S

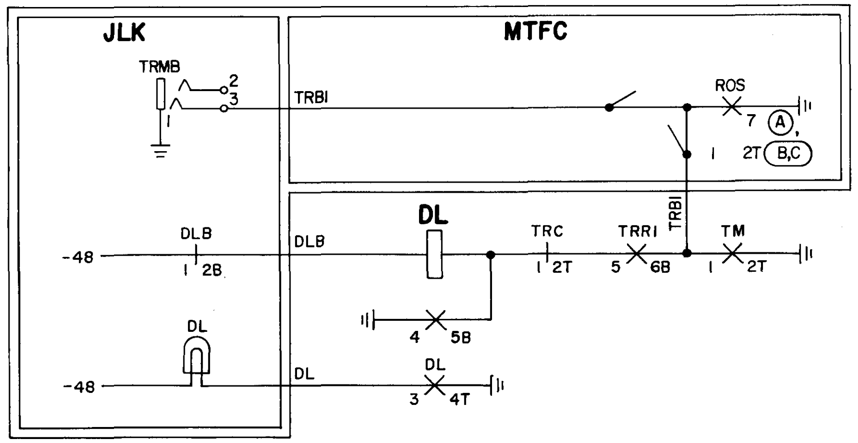
BELL TELEPHONE LABORATORIES
INCORPORATED

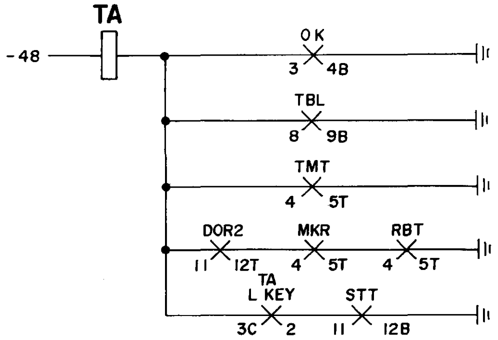
E-7421-L (4-73)

AUTOMATIC MONITOR REGISTER SENDER TEST









ISSUE
5

TIMING

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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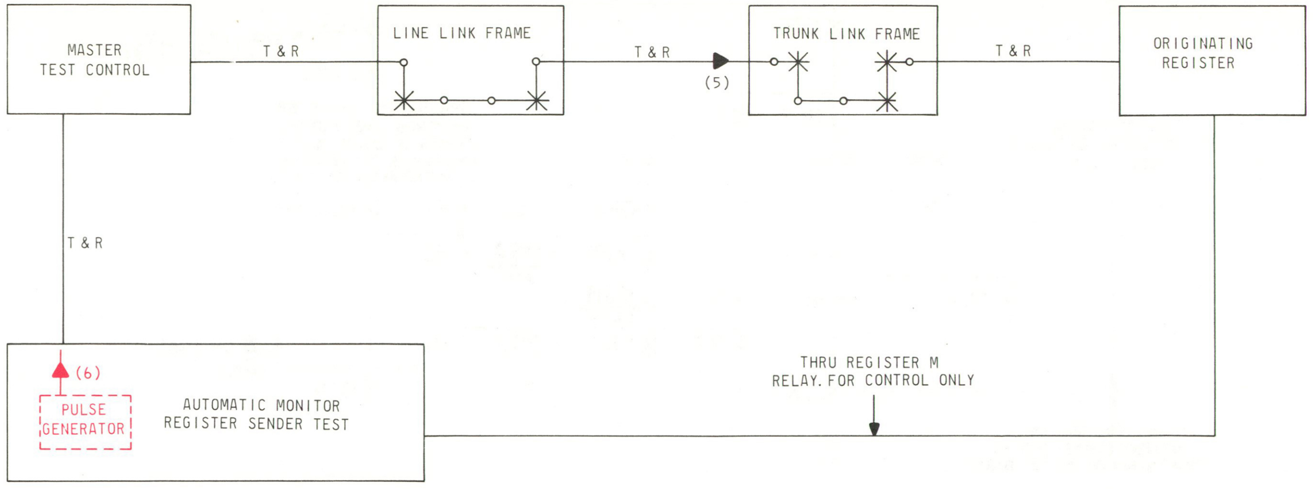
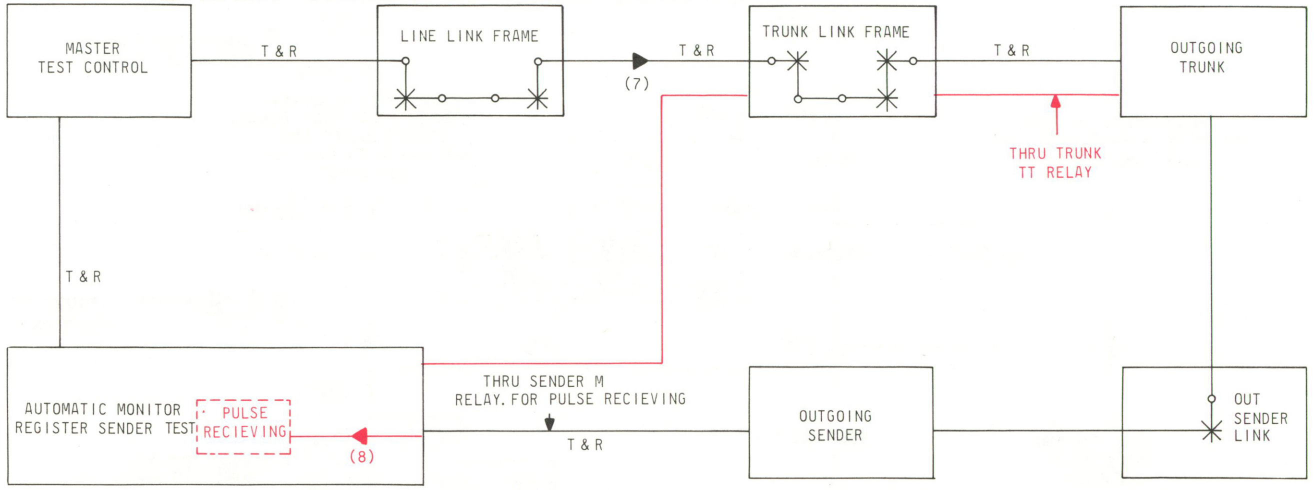
SFD-10-01-L125

E-7461 (10-71)

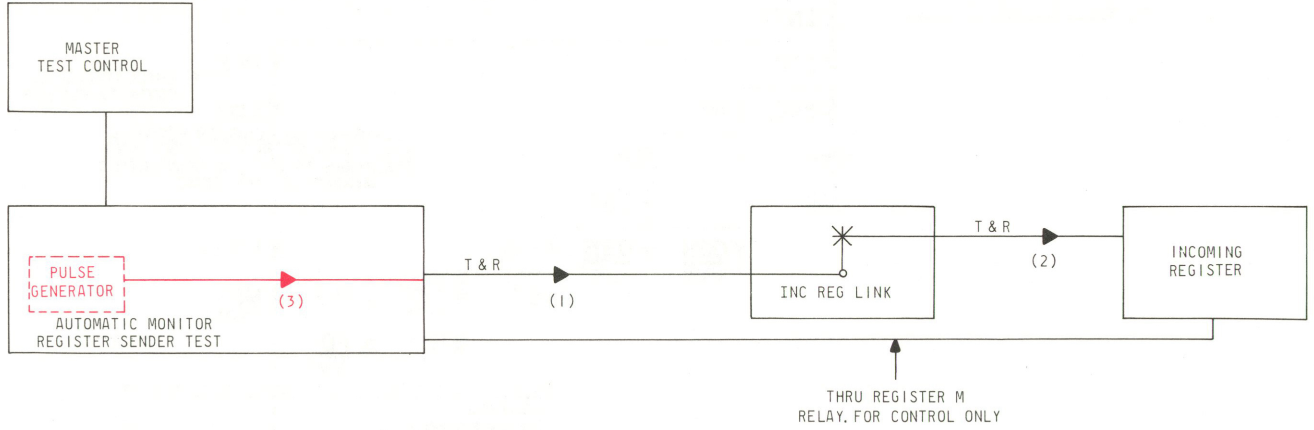
ORIGINATING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR



SENDER CLASS OF TEST USING AUTOMATIC MONITOR



INCOMING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR



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L203	SEQUENCE CHART - ORIGINATING REGISTER TEST, "TOUCH-TONE" PULSING
L204	SEQUENCE CHART - SDR TEST - DIAL PULSING
L205	SEQUENCE CHART - SDR TEST - MF PULSING
L206	SEQUENCE CHART - INCOMING REGISTER TEST DIAL PULSE
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L210	FINAL DIGIT CONTROL REGISTER TEST
L211	SENDER REGISTER TEST
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L214	OUT STEERING CONTROL PREFIX DIGITS CONTROLLED BY MTC (STANDARD)
L215	OUT STEERING REGISTER TEST
L216	DIGIT CONTROL - REGISTER TESTS
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L219	DIAL PULSE GENERATOR REGISTER TEST
L220	MF DIGIT CONTROL
L221	"TOUCH-TONE" CONTROL
L222	DIAL PULSE GENERATOR
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L224	TIP AND RING CONTROL REGISTER TEST
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L238	SENDER TEST
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L240	SENDER TEST
L241	TIMING - SENDER TEST

CAUTION !

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART L2
PULSING

SFD-10-01-L201

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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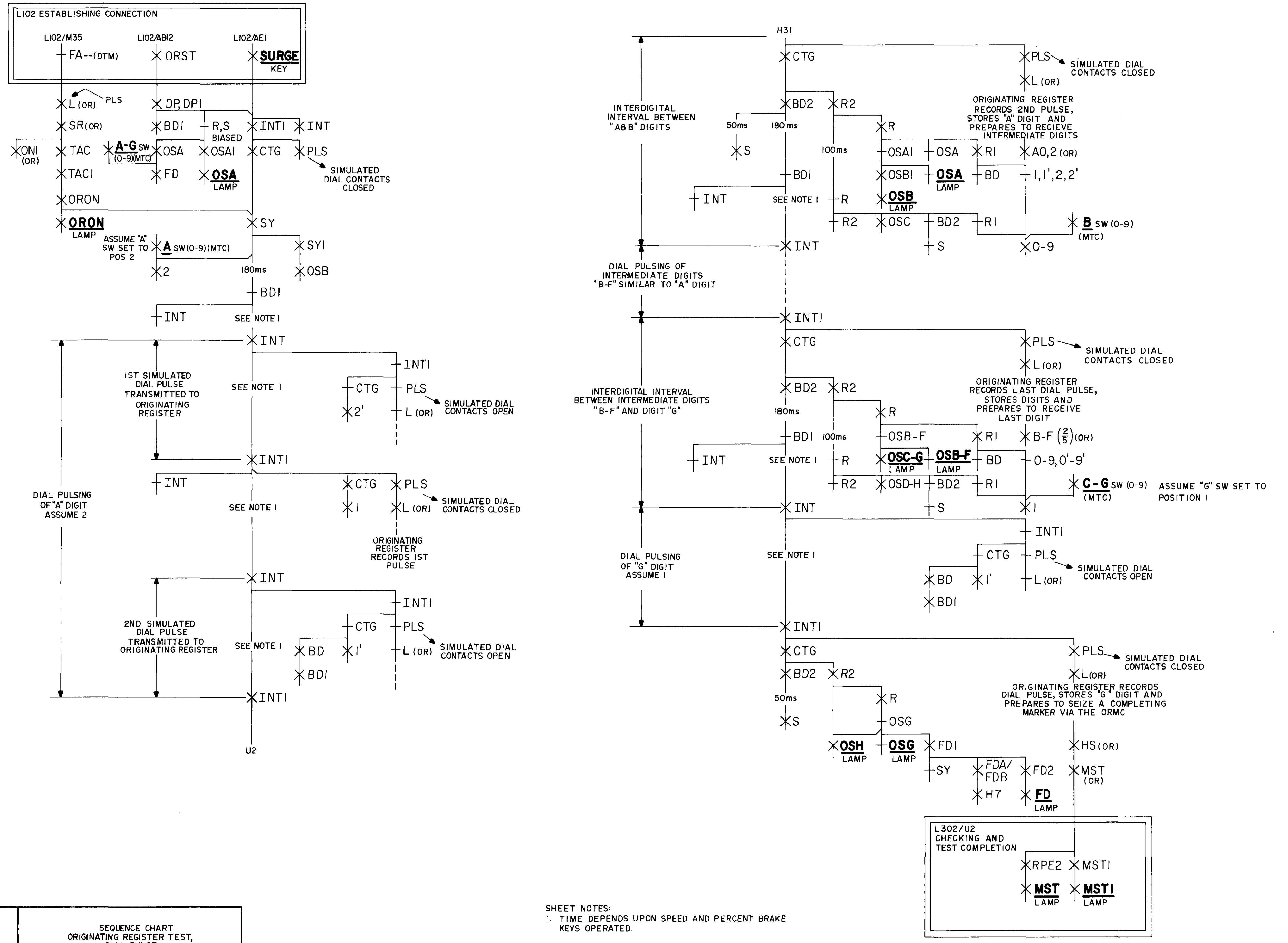
SFD-10-01-L201
2 SHEETS, SHEET 1

E-7421 (10-71)


L102 ESTABLISHING CONNECTION
L102/M35
FA--(DTM)
L102/AB12
ORST
L102/AE1
SURGE KEY
L (OR)
PLS
DP, DP1
SR(OR)
BD1
R,S BIASED
INT1
INT
ON1 (OR)
TAC
A-G SW (0-9)(MTC)
OSA
OSA1
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
TAC1
FD
OSA LAMP
ORON
ORON LAMP
SY
ASSUME "A" SW SET TO POS 2
A SW (0-9)(MTC)
SY1
2
180ms
OSB
BD1
INT
SEE NOTE 1
INT
1ST SIMULATED DIAL PULSE TRANSMITTED TO ORIGINATING REGISTER
SEE NOTE 1
INT1
CTG
PLS
SIMULATED DIAL CONTACTS OPEN
2'
L (OR)
INT1
DIAL PULSING OF "A" DIGIT ASSUME 2
INT
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
SEE NOTE 1
1
L (OR)
ORIGINATING REGISTER RECORDS 1ST PULSE
INT
2ND SIMULATED DIAL PULSE TRANSMITTED TO ORIGINATING REGISTER
INT1
CTG
PLS
SIMULATED DIAL CONTACTS OPEN
SEE NOTE 1
BD
1'
L (OR)
BD1
INT1
U2
H31
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
L (OR)
INTERDIGITAL INTERVAL BETWEEN "A & B" DIGITS
BD2
R2
ORIGINATING REGISTER RECORDS 2ND PULSE, STORES "A" DIGIT AND PREPARES TO RECIEVE INTERMEDIATE DIGITS
50ms
180 ms
R
S
100ms
OSA1
OSA
R1
A0,2 (OR)
BD1
OSB1
OSA LAMP
BD
1,1',2,2'
INT
SEE NOTE 1
R
OSB LAMP
R2
OSC
BD2
R1
B SW (0-9) (MTC)
INT
S
0-9
DIAL PULSING OF INTERMEDIATE DIGITS "B-F" SIMILAR TO "A" DIGIT
INT1
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
L (OR)
INTERDIGITAL INTERVAL BETWEEN INTERMEDIATE DIGITS "B-F" AND DIGIT "G"
BD2
R2
ORIGINATING REGISTER RECORDS LAST DIAL PULSE, STORES DIGITS AND PREPARES TO RECEIVE LAST DIGIT
180ms
R
BD1
100ms
OSB-F
R1
B-F (2/5)(OR)
INT
SEE NOTE 1
R
OSC-G LAMP
OSB-F LAMP
BD
0-9,0'-9'
R2
OSD-H
BD2
R1
C-G SW (0-9) (MTC)
ASSUME "G" SW SET TO POSITION 1
INT
S
1
INT1
DIAL PULSING OF "G" DIGIT ASSUME 1
SEE NOTE 1
CTG
PLS
SIMULATED DIAL CONTACTS OPEN
BD
1'
L (OR)
BD1
INT1
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
BD2
R2
L(OR)
ORIGINATING REGISTER RECORDS DIAL PULSE, STORES "G" DIGIT AND PREPARES TO SEIZE A COMPLETING MARKER VIA THE ORMC
50ms
R
OSG
S
OSH LAMP
OSG LAMP
FD1
HS(OR)
SY
FDA/FDB
FD2
MST (OR)
H7
FD LAMP
L302/U2 CHECKING AND TEST COMPLETION
RPE2
MST1
MST LAMP
MST1 LAMP

SHEET NOTES:
1. TIME DEPENDS UPON SPEED AND PERCENT BRAKE KEYS OPERATED.

ISSUE
5

SFD-10-01-L202

SEQUENCE CHART
ORIGINATING REGISTER TEST,
DIAL PULSE

DWG SIZE 6S

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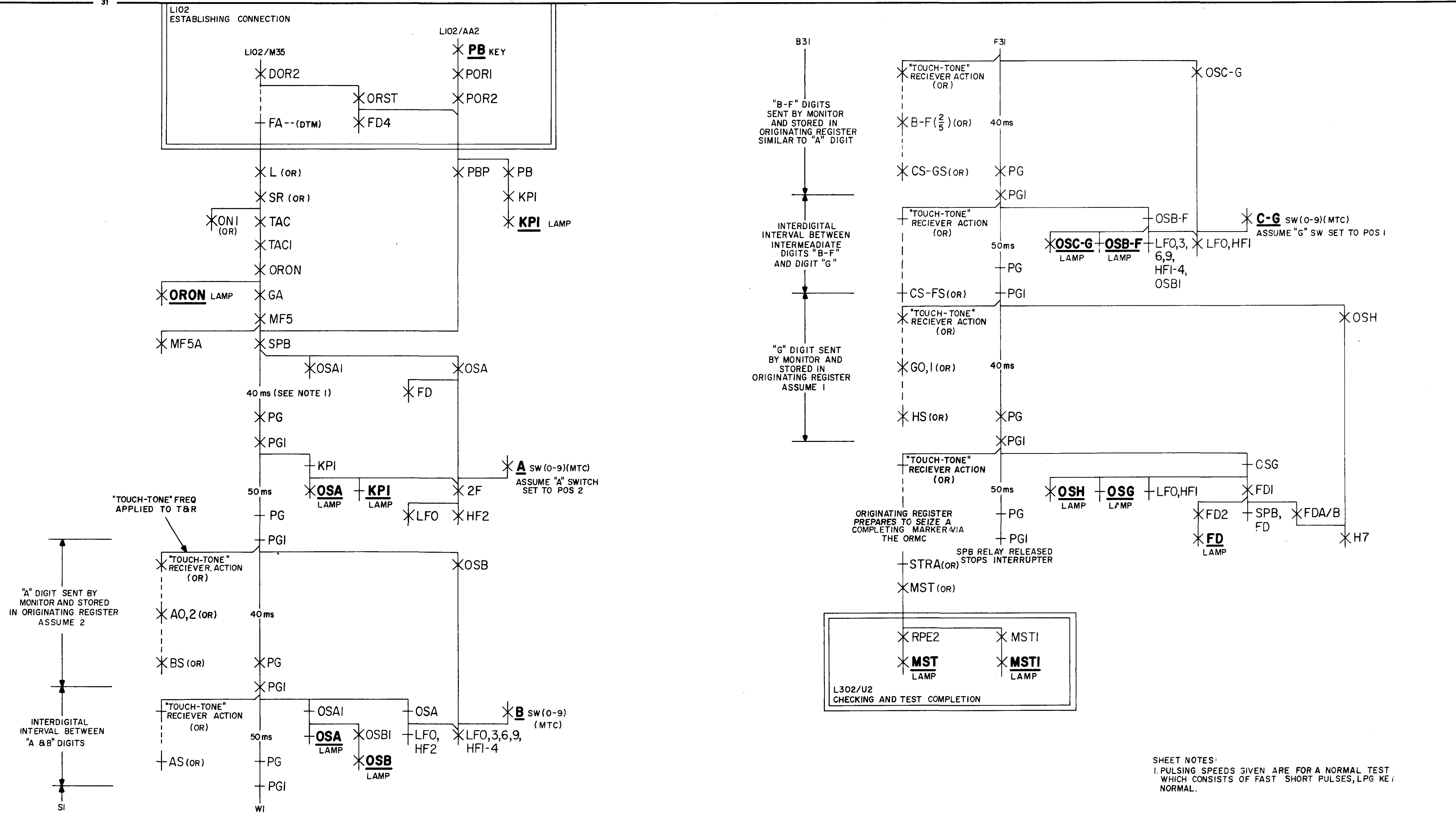
E-7481-L (4-73)

SFD-10-01-L202


L102
ESTABLISHING CONNECTION
L102/M35
L102/AA2
PB KEY
DOR2
PORI
ORST
POR2
FA--(DTM)
FD4
L (OR)
PBP
PB
SR (OR)
KPI
ONI (OR)
TAC
KPI LAMP
TACI
ORON
ORON LAMP
GA
MF5
MF5A
SPB
OSAI
OSA
40 ms (SEE NOTE I)
FD
PG
PGI
KPI
A SW(0-9)(MTC)
ASSUME "A" SWITCH SET TO POS 2
50 ms
OSA LAMP
KPI LAMP
2F
"TOUCH-TONE" FREQ APPLIED TO T&R
PG
LFO
HF2
PGI
"TOUCH-TONE" RECIEVER ACTION (OR)
OSB
"A" DIGIT SENT BY MONITOR AND STORED IN ORIGINATING REGISTER ASSUME 2
AO,2 (OR)
40 ms
BS (OR)
PG
PGI
"TOUCH-TONE" RECIEVER ACTION (OR)
OSAI
OSA
B SW(0-9) (MTC)
INTERDIGITAL INTERVAL BETWEEN "A & B" DIGITS
50 ms
OSA LAMP
OSBI
LFO, HF2
LFO,3,6,9, HFI-4
AS (OR)
PG
OSB LAMP
PGI
SI
WI
B31
F31
"TOUCH-TONE" RECIEVER ACTION (OR)
OSC-G
"B-F" DIGITS SENT BY MONITOR AND STORED IN ORIGINATING REGISTER SIMILAR TO "A" DIGIT
B-F(2/5) (OR)
40 ms
CS-GS (OR)
PG
PGI
"TOUCH-TONE" RECIEVER ACTION (OR)
OSB-F
C-G SW(0-9)(MTC)
ASSUME "G" SW SET TO POS I
INTERDIGITAL INTERVAL BETWEEN INTERMEADIATE DIGITS "B-F" AND DIGIT "G"
50 ms
OSC-G LAMP
OSB-F LAMP
LFO,3, 6,9, HFI-4, OSBI
LFO,HFI
PG
CS-FS (OR)
PGI
"TOUCH-TONE" RECIEVER ACTION (OR)
OSH
"G" DIGIT SENT BY MONITOR AND STORED IN ORIGINATING REGISTER ASSUME I
GO,I (OR)
40 ms
HS (OR)
PG
PGI
"TOUCH-TONE" RECIEVER ACTION (OR)
CSG
50 ms
OSH LAMP
OSG LAMP
LFO,HFI
FDI
ORIGINATING REGISTER PREPARES TO SEIZE A COMPLETING MARKER VIA THE ORMC
PG
FD2
SPB, FD
FDA/B
PGI
H7
FD LAMP
SPB RELAY RELEASED STOPS INTERRUPTER
STRA (OR)
MST (OR)
RPE2
MSTI
MST LAMP
MSTI LAMP
L302/U2
CHECKING AND TEST COMPLETION

SHEET NOTES:
1. PULSING SPEEDS GIVEN ARE FOR A NORMAL TEST WHICH CONSISTS OF FAST SHORT PULSES, LPG KEY NORMAL.

ISSUE
5

SEQUENCE CHART
ORIGINATING REGISTER TEST,
"TOUCH-TONE" PULSING

SFD-10-01-L203

BELL TELEPHONE LABORATORIES
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DWG SIZE 6S

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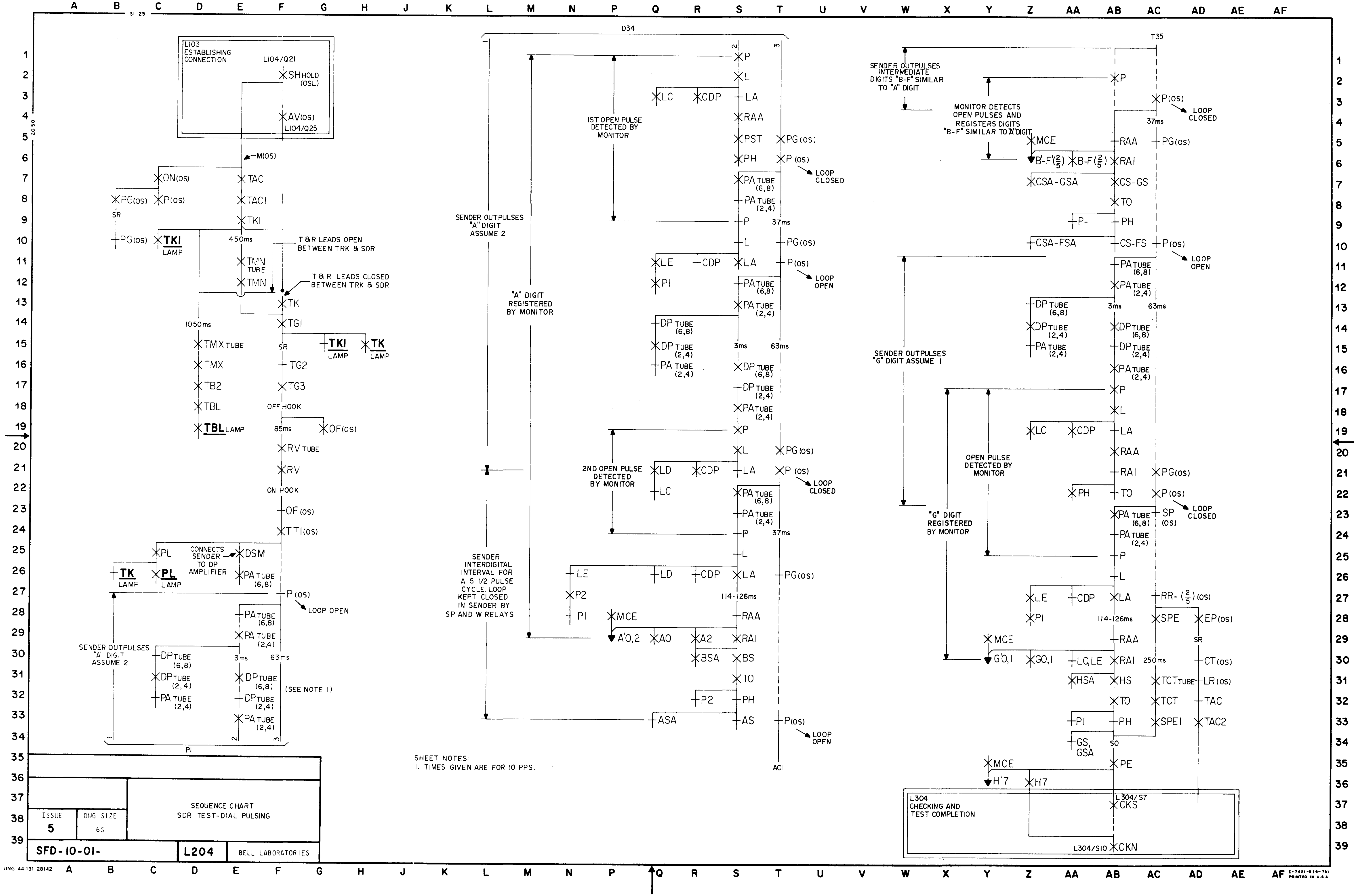
SFD-10-01-L203

BRUNING 44-131 24092

E-7421-B (10-71)



SHEET NOTES:
1. TIMES GIVEN ARE FOR 10 PPS.

SEQUENCE CHART
SDR TEST-DIAL PULSING

ISSUE	DWG SIZE
5	6S

SFD-10-01- L204
BELL LABORATORIES

ING 44-131 28142

E-7421-8 (6-75)
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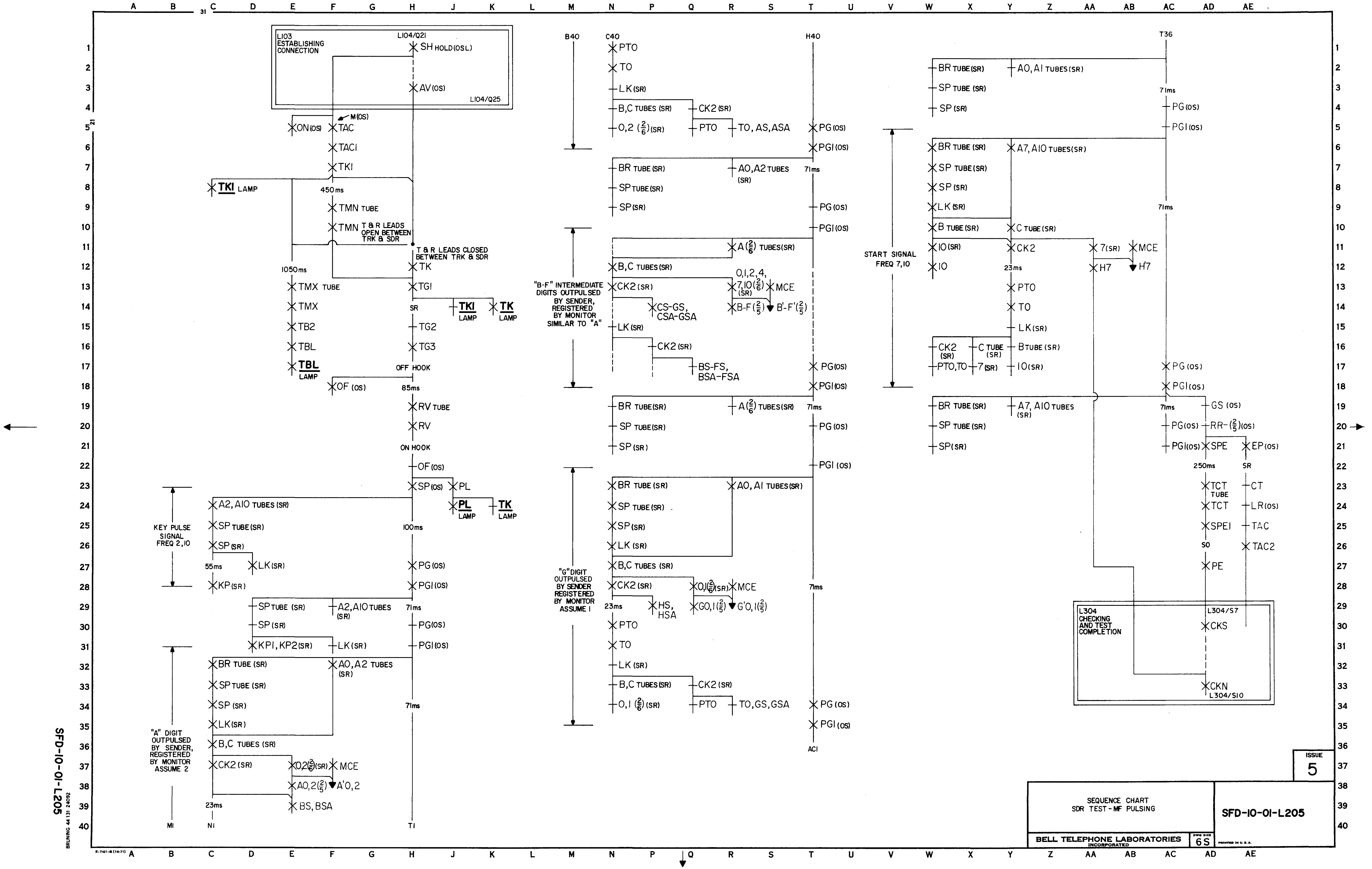
SFD-10-01-L204



ISSUE
5

SEQUENCE CHART
SDR TEST - MF PULSING

SFD-10-01-L205

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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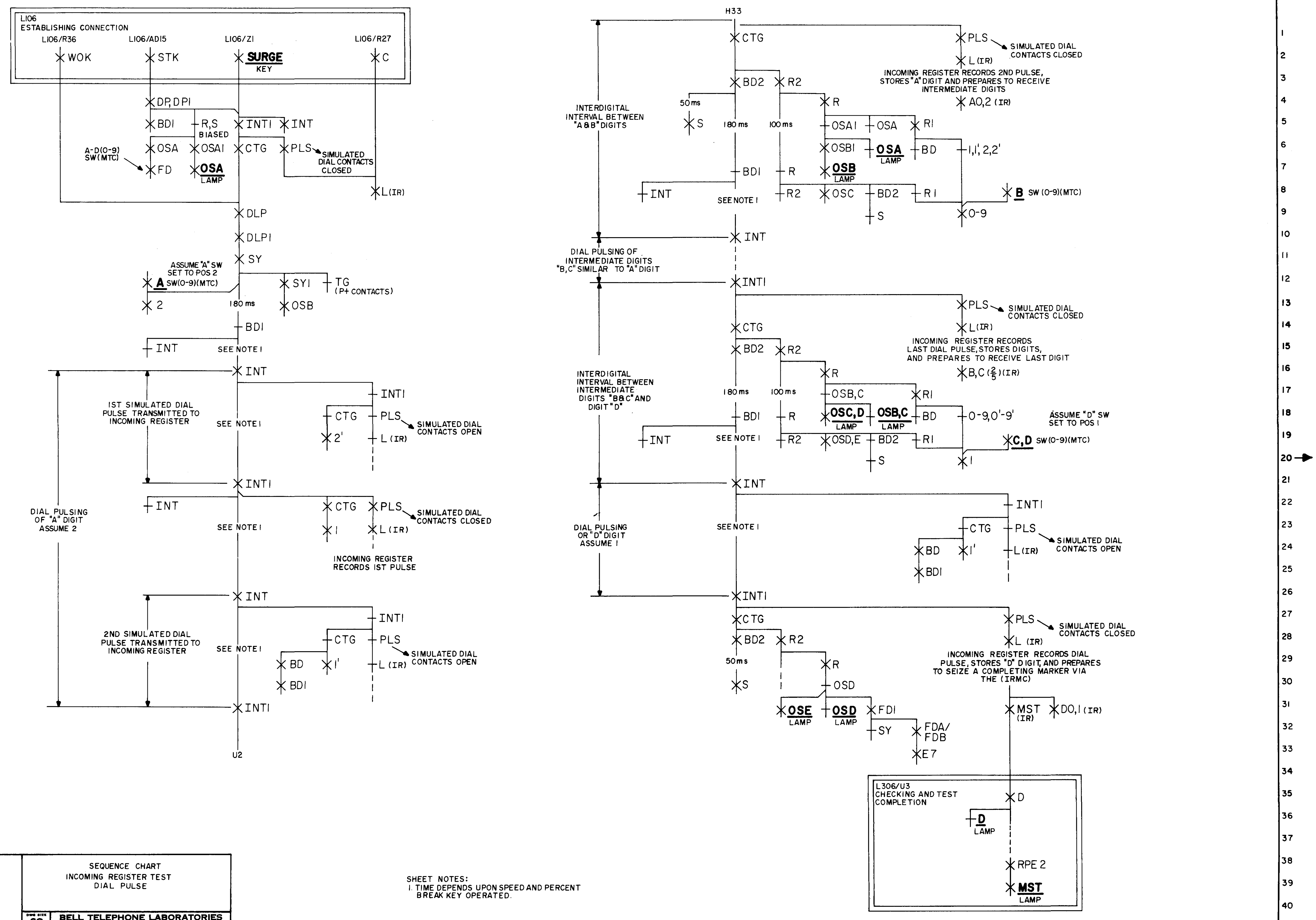
SFD-10-01-L205



L106
ESTABLISHING CONNECTION
L106/R36
L106/AD15
L106/Z1
L106/R27
WOK
STK
SURGE
KEY
C
DP, DP1
BD1
R,S
BIASED
INT1
INT
A-D(0-9)
SW(MTC)
OSA
OSA1
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
FD
OSA
LAMP
L(IR)
DLP
DLP1
SY
ASSUME "A" SW SET TO POS 2
A SW(0-9)(MTC)
SY1
TG (P+ CONTACTS)
2
180 ms
OSB
BD1
INT
SEE NOTE 1
INT
INT1
1ST SIMULATED DIAL PULSE TRANSMITTED TO INCOMING REGISTER
SEE NOTE 1
CTG
PLS
SIMULATED DIAL CONTACTS OPEN
2'
L (IR)
INT1
INT
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
DIAL PULSING OF "A" DIGIT ASSUME 2
SEE NOTE 1
1
L (IR)
INCOMING REGISTER RECORDS 1ST PULSE
INT
INT1
2ND SIMULATED DIAL PULSE TRANSMITTED TO INCOMING REGISTER
SEE NOTE 1
CTG
PLS
BD
1'
L (IR)
SIMULATED DIAL CONTACTS OPEN
BD1
INT1
U2
H33
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
L (IR)
INCOMING REGISTER RECORDS 2ND PULSE, STORES "A" DIGIT AND PREPARES TO RECEIVE INTERMEDIATE DIGITS
BD2
R2
A0,2 (IR)
INTERDIGITAL INTERVAL BETWEEN "A&B" DIGITS
50 ms
R
S
180 ms
100 ms
OSA1
OSA
R1
OSB1
OSA
LAMP
BD
1,1',2,2'
BD1
R
OSB
LAMP
INT
SEE NOTE 1
R2
OSC
BD2
R1
B SW (0-9)(MTC)
S
0-9
INT
DIAL PULSING OF INTERMEDIATE DIGITS "B,C" SIMILAR TO "A" DIGIT
INT1
PLS
SIMULATED DIAL CONTACTS CLOSED
L (IR)
CTG
INCOMING REGISTER RECORDS LAST DIAL PULSE, STORES DIGITS, AND PREPARES TO RECEIVE LAST DIGIT
BD2
R2
B,C (2/5) (IR)
INTERDIGITAL INTERVAL BETWEEN INTERMEDIATE DIGITS "B&C" AND DIGIT "D"
R
180 ms
100 ms
OSB,C
R1
OSC,D
LAMP
OSB,C
LAMP
BD
0-9,0'-9'
ASSUME "D" SW SET TO POS 1
BD1
R
INT
SEE NOTE 1
R2
OSD,E
BD2
R1
C,D SW (0-9)(MTC)
S
1
INT
INT1
DIAL PULSING OR "D" DIGIT ASSUME 1
SEE NOTE 1
CTG
PLS
SIMULATED DIAL CONTACTS OPEN
BD
1'
L (IR)
BD1
INT1
CTG
PLS
SIMULATED DIAL CONTACTS CLOSED
BD2
R2
L (IR)
INCOMING REGISTER RECORDS DIAL PULSE, STORES "D" DIGIT, AND PREPARES TO SEIZE A COMPLETING MARKER VIA THE (IRMC)
50 ms
R
S
OSD
OSE
LAMP
OSD
LAMP
FD1
MST (IR)
D0,1 (IR)
SY
FDA/ FDB
E7
L306/U3
CHECKING AND TEST COMPLETION
D
D
LAMP
RPE 2
MST
LAMP

SHEET NOTES:
1. TIME DEPENDS UPON SPEED AND PERCENT BREAK KEY OPERATED.

ISSUE
5

SFD-10-01-L206

SEQUENCE CHART
INCOMING REGISTER TEST
DIAL PULSE

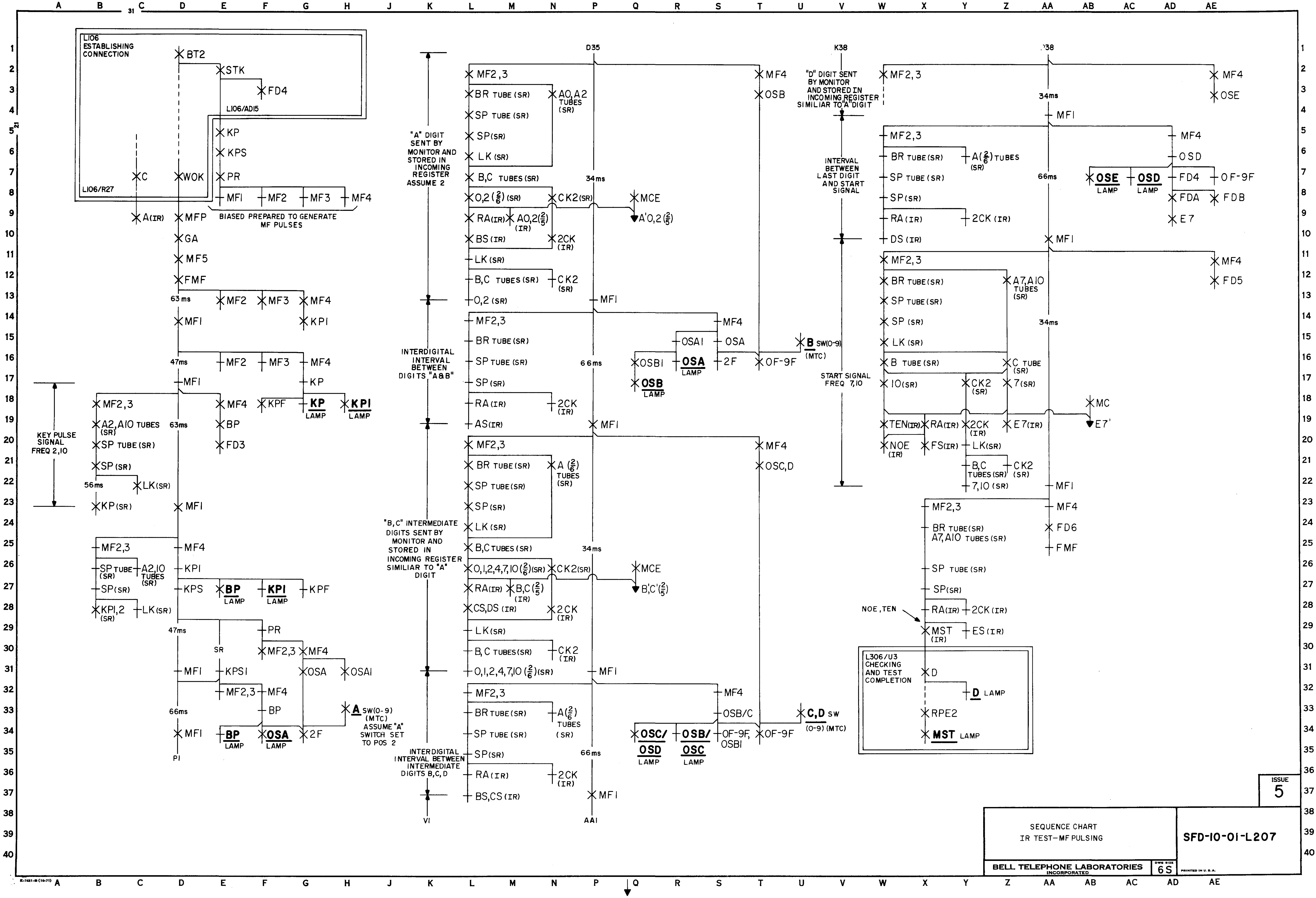
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-73)

SFD-10-01-L206



ISSUE
5

SEQUENCE CHART
IR TEST–MF PULSING

SFD-10-01-L207

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

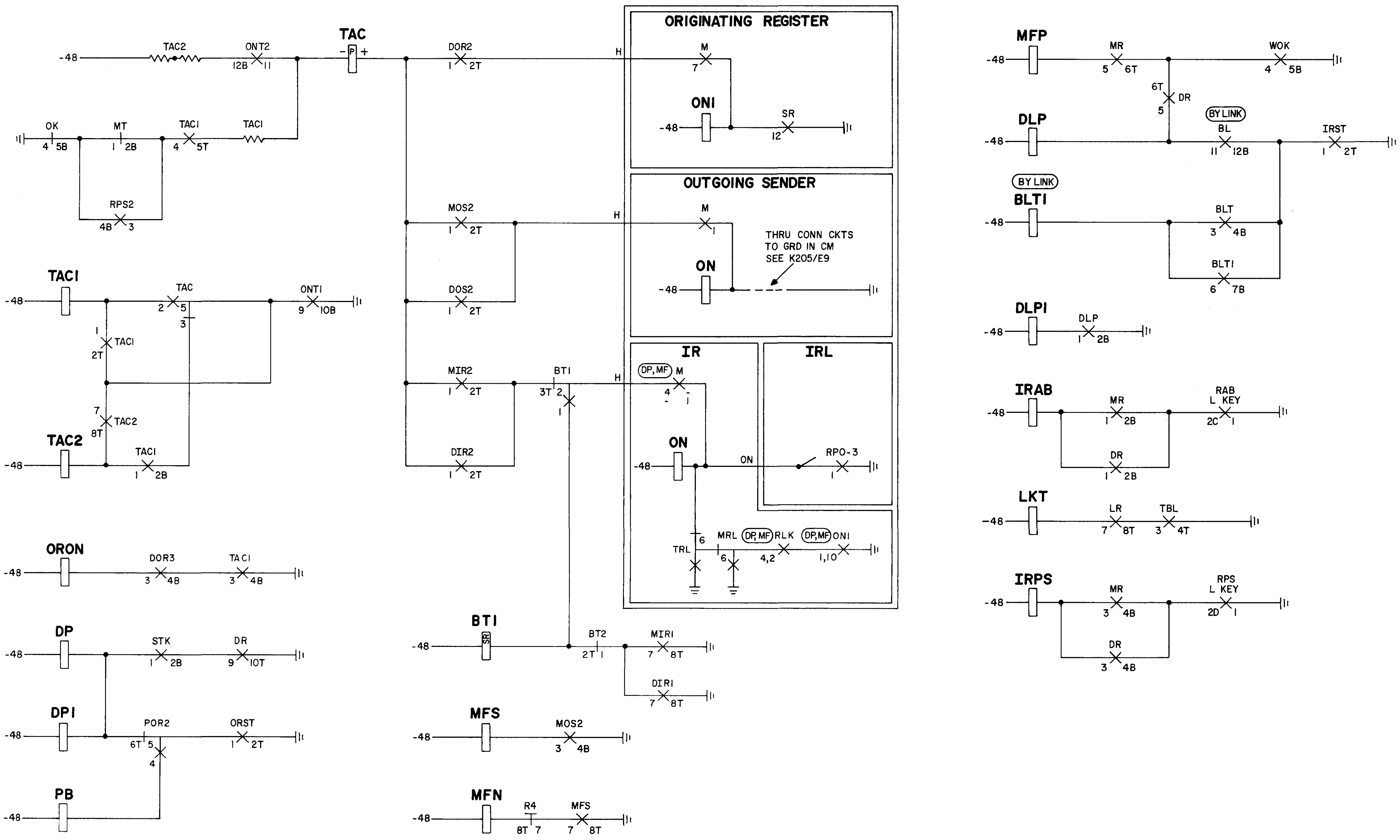
PRINTED IN U.S.A.

SFD-10-01-L207

BRUNING 44-131 24092

E-7421-B (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L208

REGISTER AND SENDER TEST

PRINTED IN U.S.A.

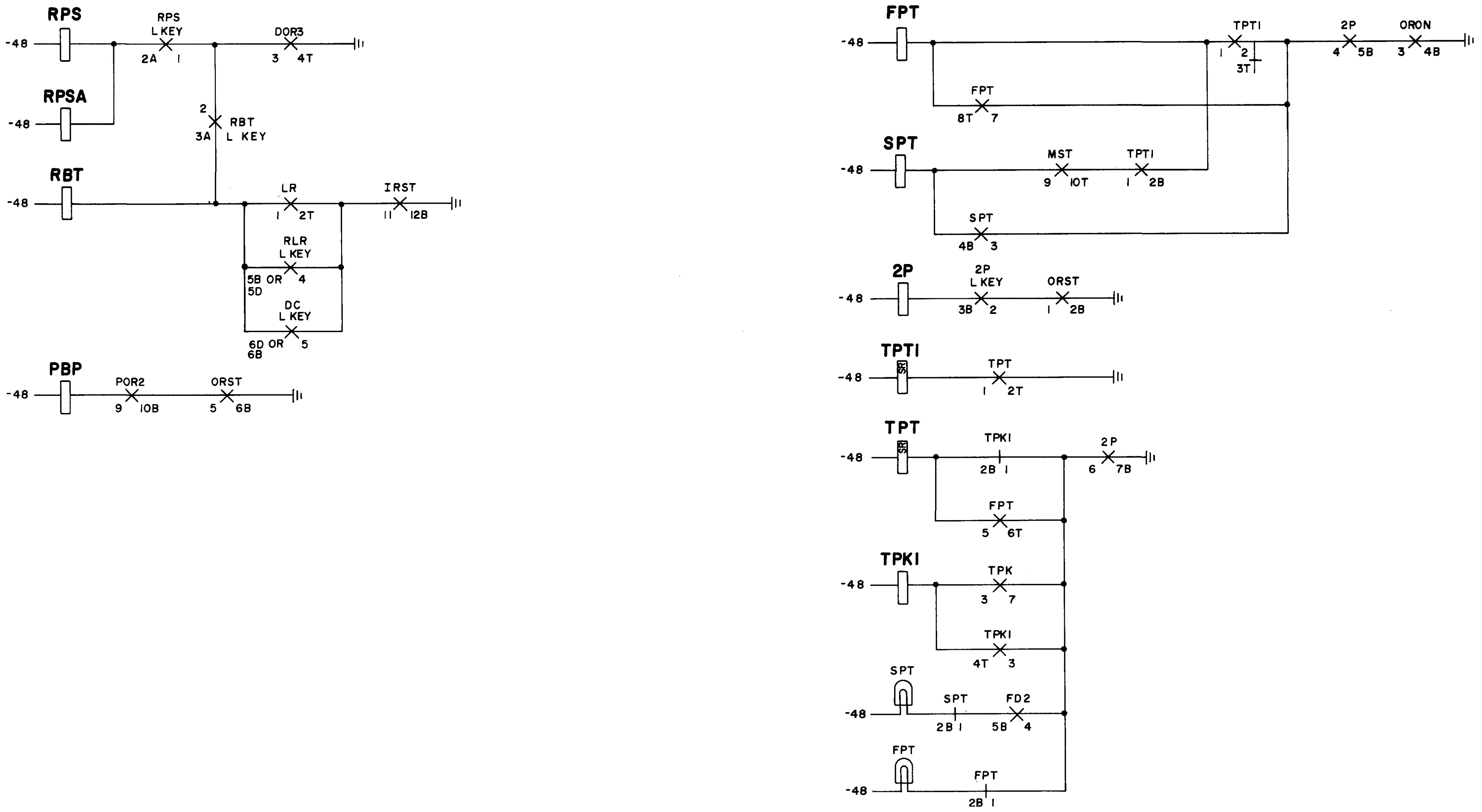
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L208

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

REGISTER TEST AND
TWO PARTY CONTROL

SFD-10-01-L209

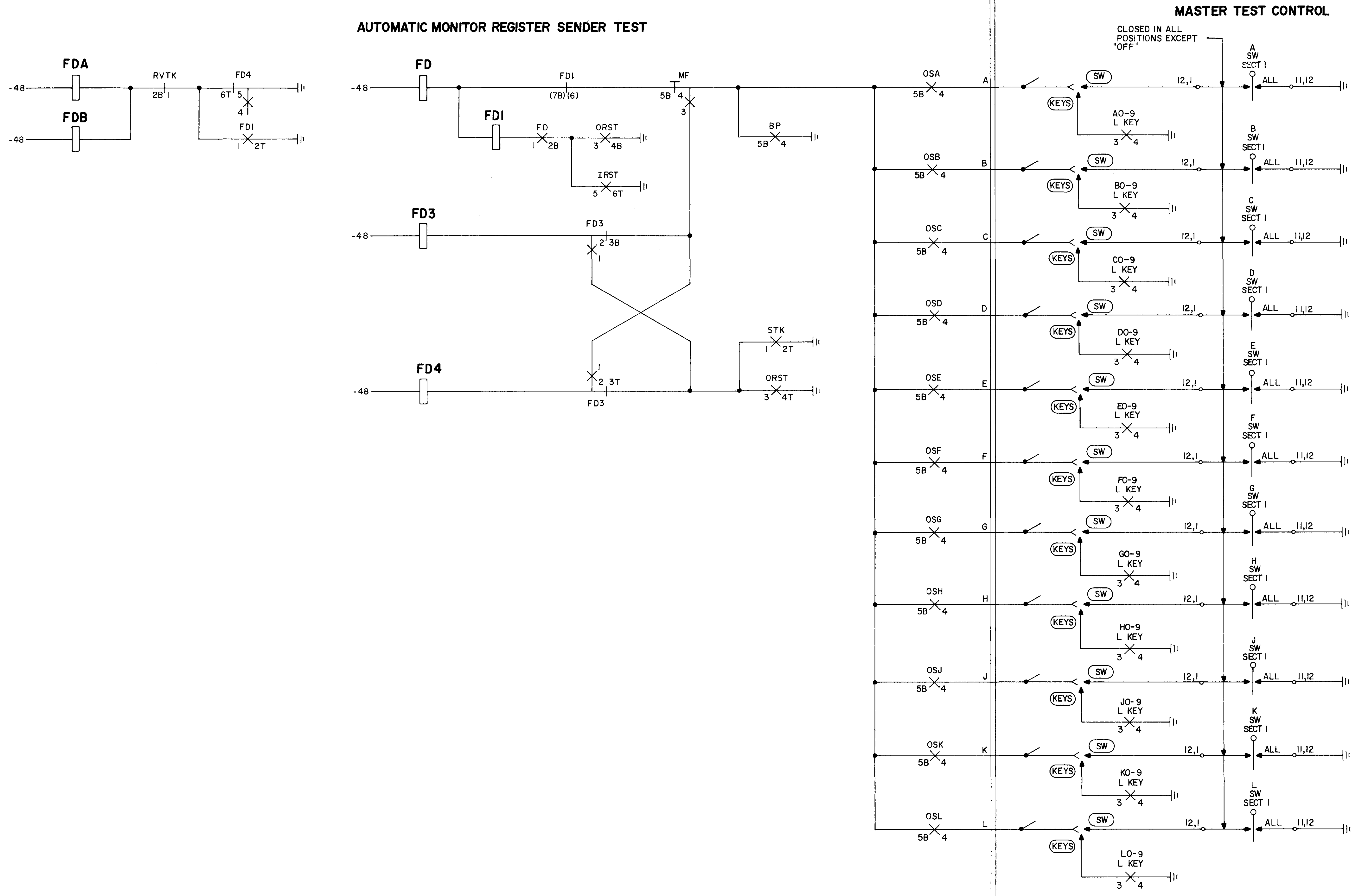
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

AUTOMATIC MONITOR REGISTER SENDER TEST

MASTER TEST CONTROL



ISSUE
5

SFD-10-01-L210

FINAL DIGIT CONTROL
REGISTER TEST

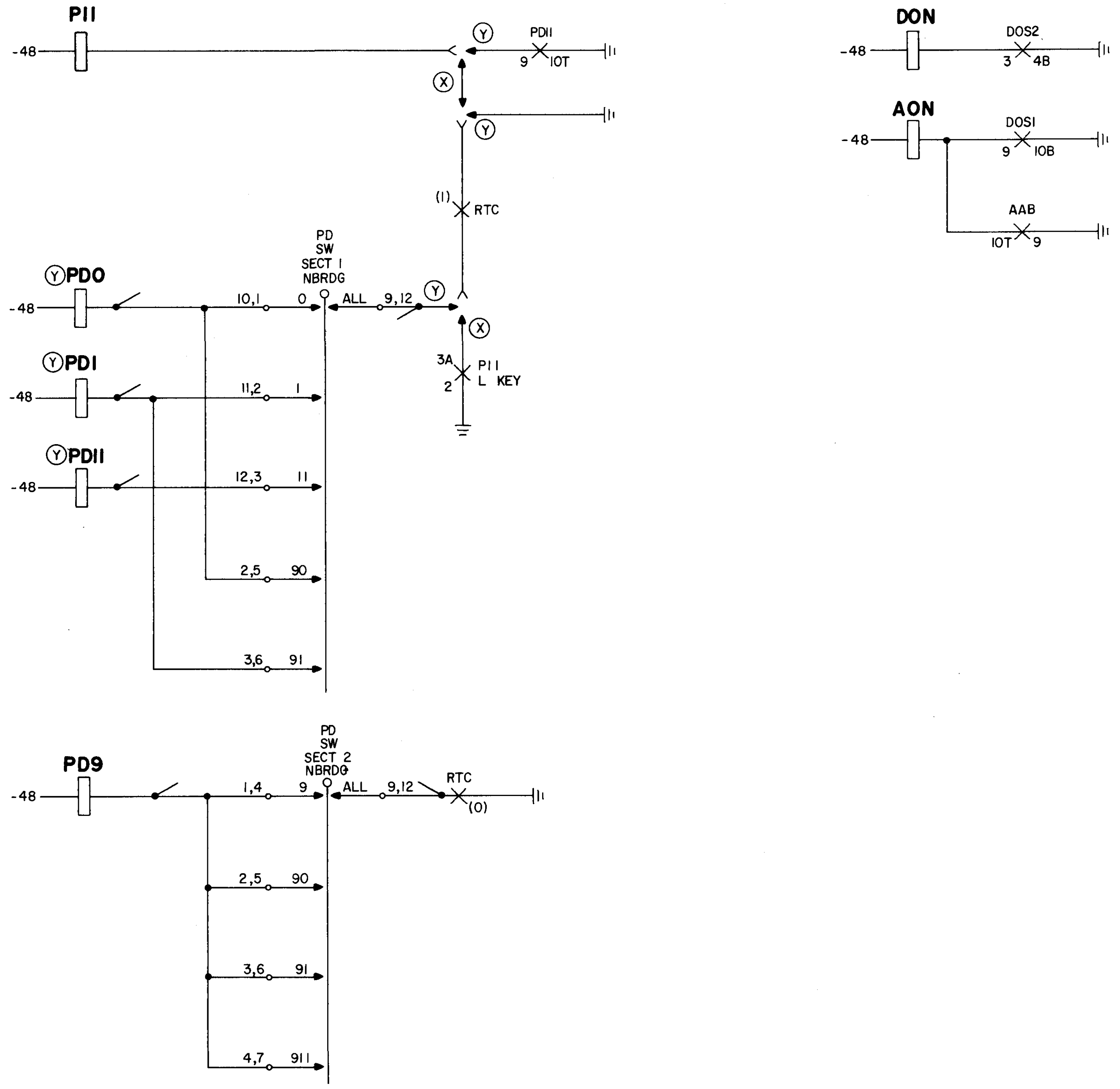
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-73)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓧ WHERE THE OUTPULSING OF PREFIX DIGTS ARE CONTROLLED BY THE P KEYS IN AMRST.
Ⓨ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE PD SWITCH IN AMRST.

ISSUE 5

SENDER REGISTER TEST

SFD-10-01-L211

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

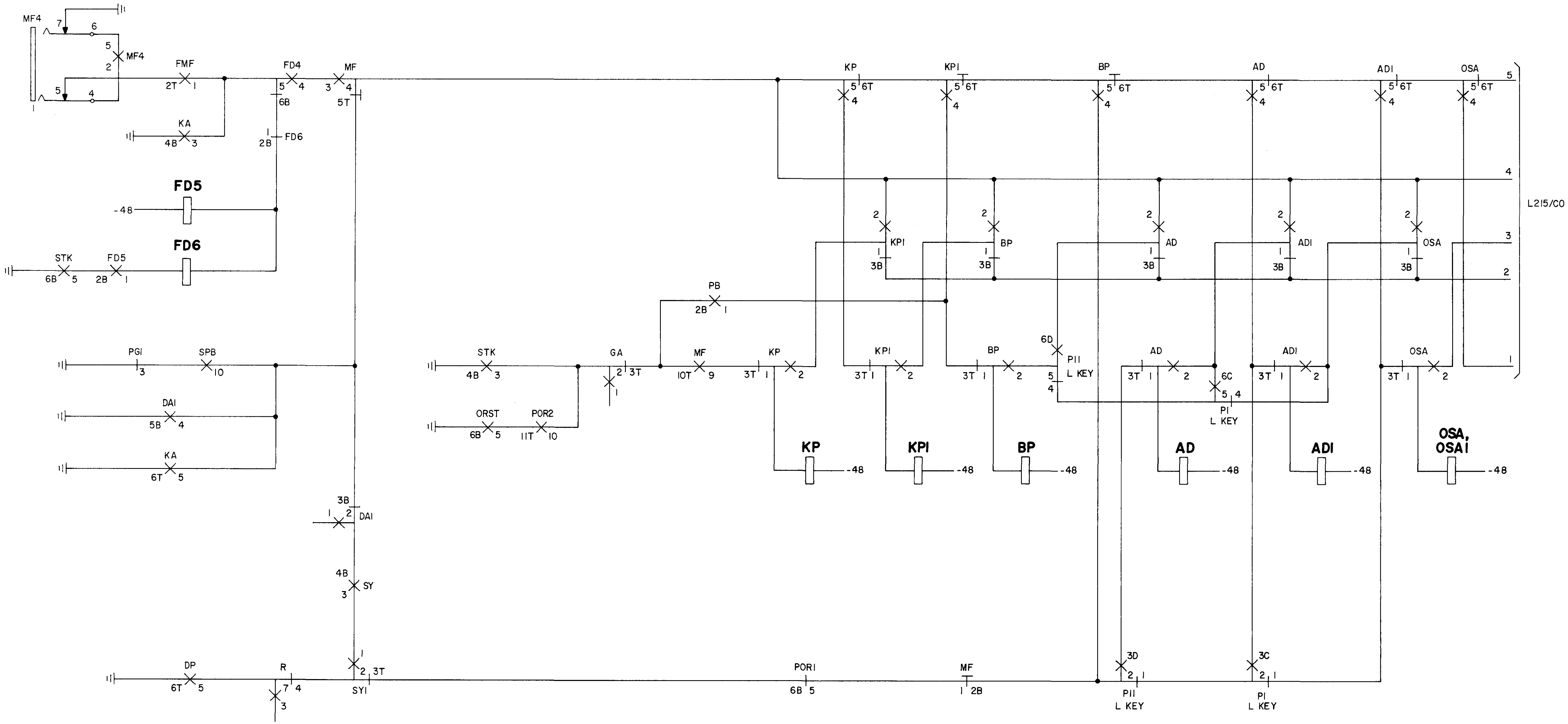
PRINTED IN U.S.A.

SFD-10-01-L211

E-7481 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST

(SEE NOTE 1)



SHEET NOTES:
1. THIS SHEET DEPICTS THE OUTPULSING OF PREFIX DIGITS CONTROLLED BY THE P KEYS IN AMRST.
2. SFD L212 IS OPTION X.

ISSUE
5

SFD-10-01-L212

OUT STEERING CONTROL
PREFIX DIGITS CONTROLLED BY
P KEYS IN AMRST (A&M)
(SEE NOTE 1)

DWG SIZE 6S

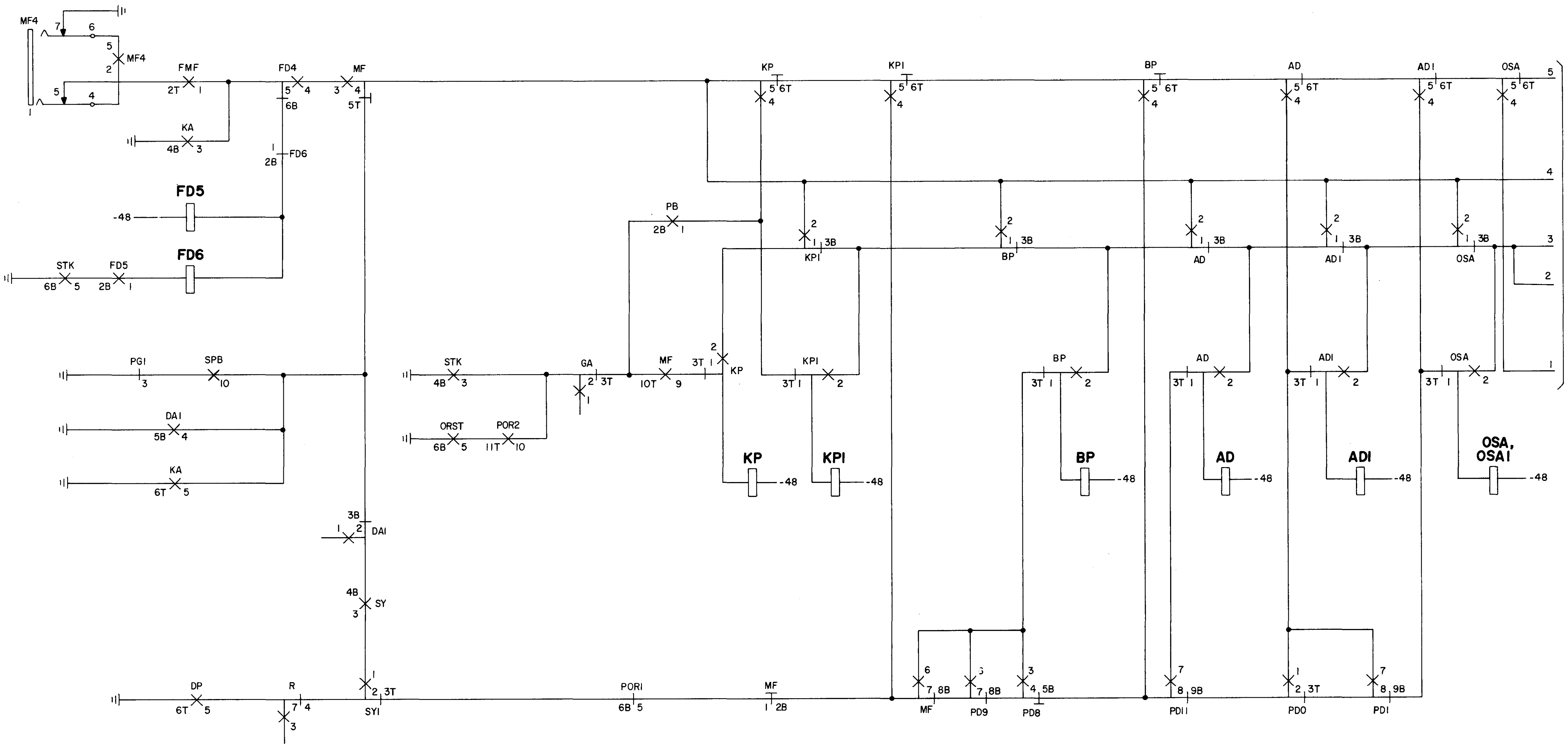
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

SFD-10-01-L212

AUTOMATIC MONITOR REGISTER SENDER TEST

(SEE NOTE 1)



SHEET NOTES:
1. THIS SHEET DEPICTS THE OUTPULSING OF PREFIX DIGITS CONTROLLED BY THE PD SWITCH IN AMRST.
2. SFD L213 IS OPTION Y.

ISSUE
5

OUT STEERING CONTROL
PREFIX DIGITS CONTROLLED BY
PD SWITCH IN AMRST (A&M)
(SEE NOTE 1)

SFD-10-01-L213

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

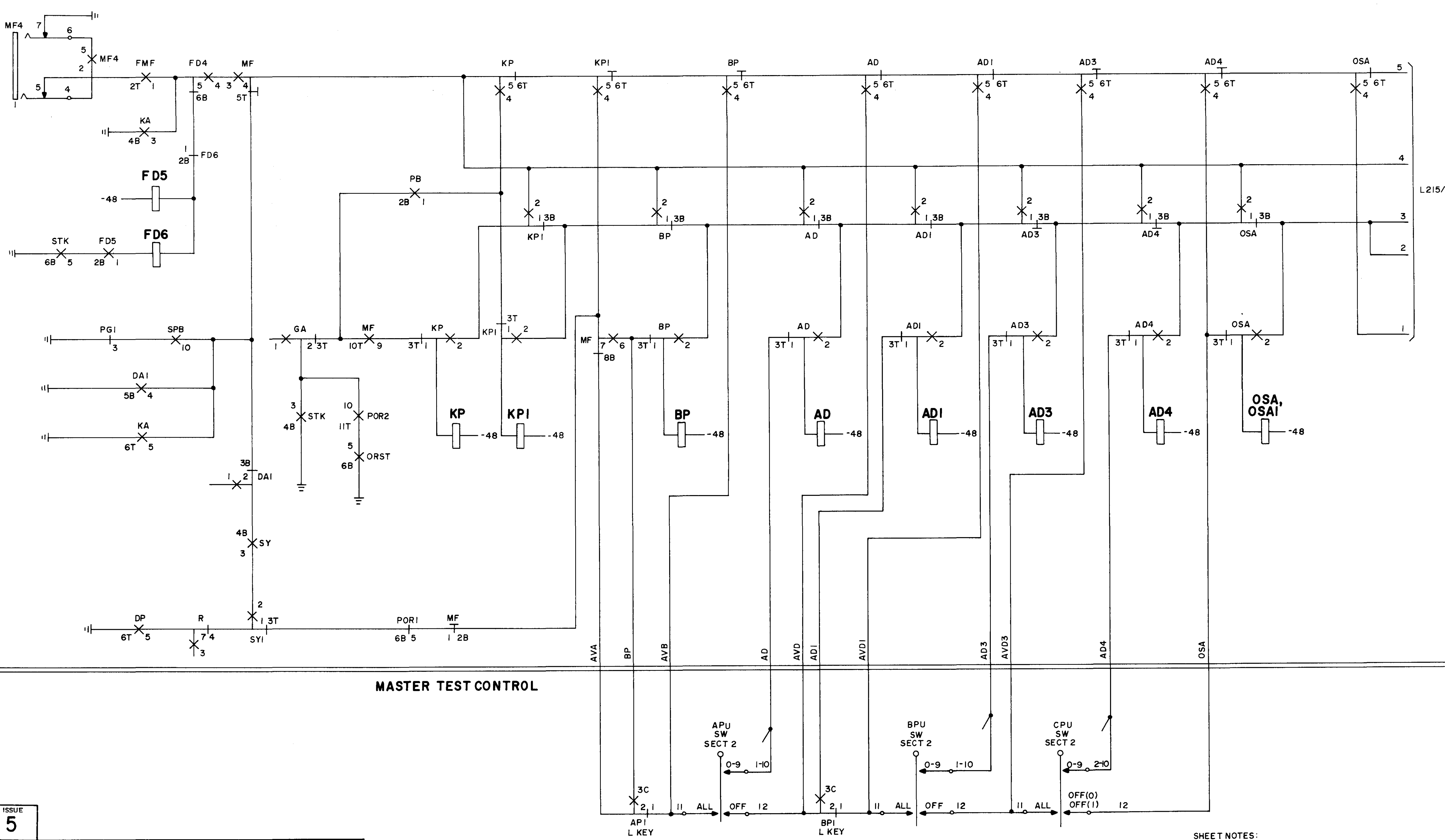
PRINTED IN U.S.A.

E-7461 (10-71)

SFD-10-01-L213

AUTOMATIC MONITOR REGISTER SENDER TEST

(SEE NOTE 1)



SHEET NOTES:
1. THIS SHEET DEPICTS THE OUTPULSING OF PREFIX DIGITS CONTROLLED BY THE APU, BPU, CPU SWITCHES IN MTC.
2. SFD L214 IS OPTION Z.

ISSUE
5

SFD-10-01-L214

OUTSTEERING CONTROL
PREFIX DIGITS CONTROLLED
BY MTC (STANDARD)
(SEE NOTE 1)

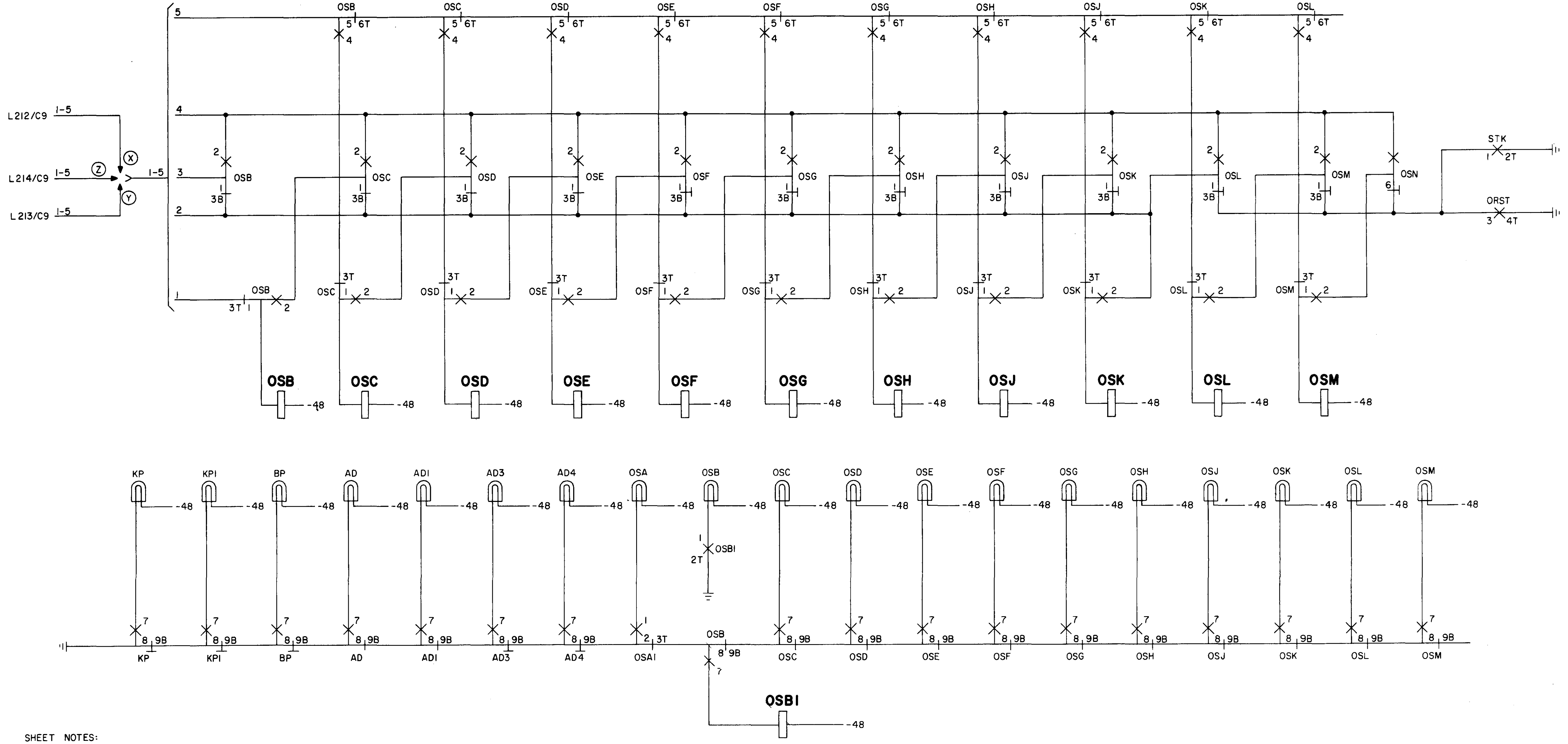
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-L214

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. OPTION ASSIGNMENTS:

Ⓧ WHERE THE OUTPULSING OF PREFIX DIGITS IS CONTROLLED BY THE P KEYS IN AMRST.

Ⓨ WHERE THE OUTPULSING OF PREFIX DIGITS IS CONTROLLED BY THE PD SWITCH IN AMRST.

Ⓩ WHERE THE OUTPULSING OF PREFIX DIGITS IS CONTROLLED BY THE APU, BPU, CPU SWITCHES IN MTC.

ISSUE
5

OUT STEERING REGISTER TEST

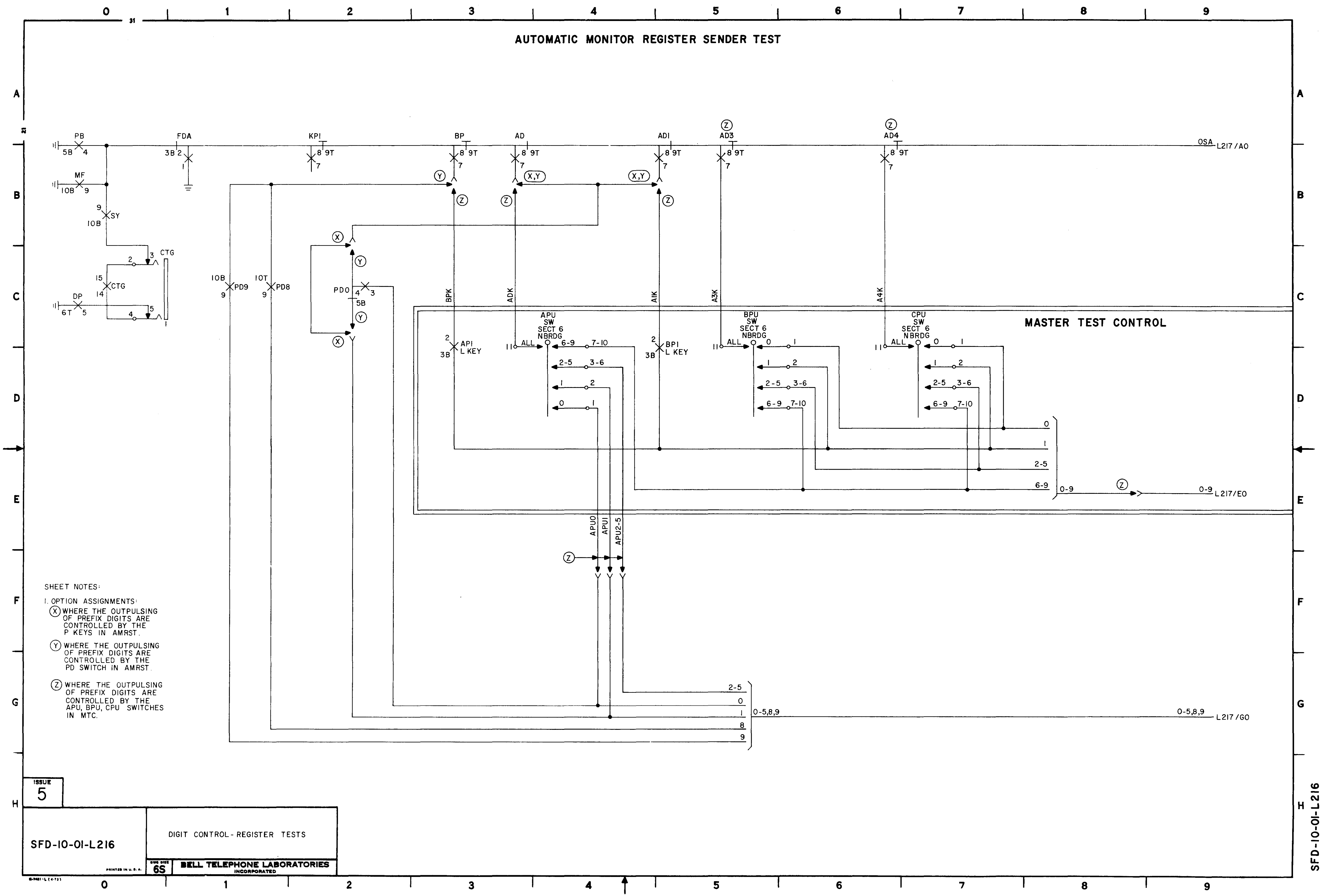
SFD-10-01-L215

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

SFD-10-01-L215



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓧ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE P KEYS IN AMRST.

Ⓨ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE PD SWITCH IN AMRST.

Ⓩ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE APU, BPU, CPU SWITCHES IN MTC.

ISSUE
5

SFD-10-01-L216

DIGIT CONTROL-REGISTER TESTS

PRINTED IN U. S. A.

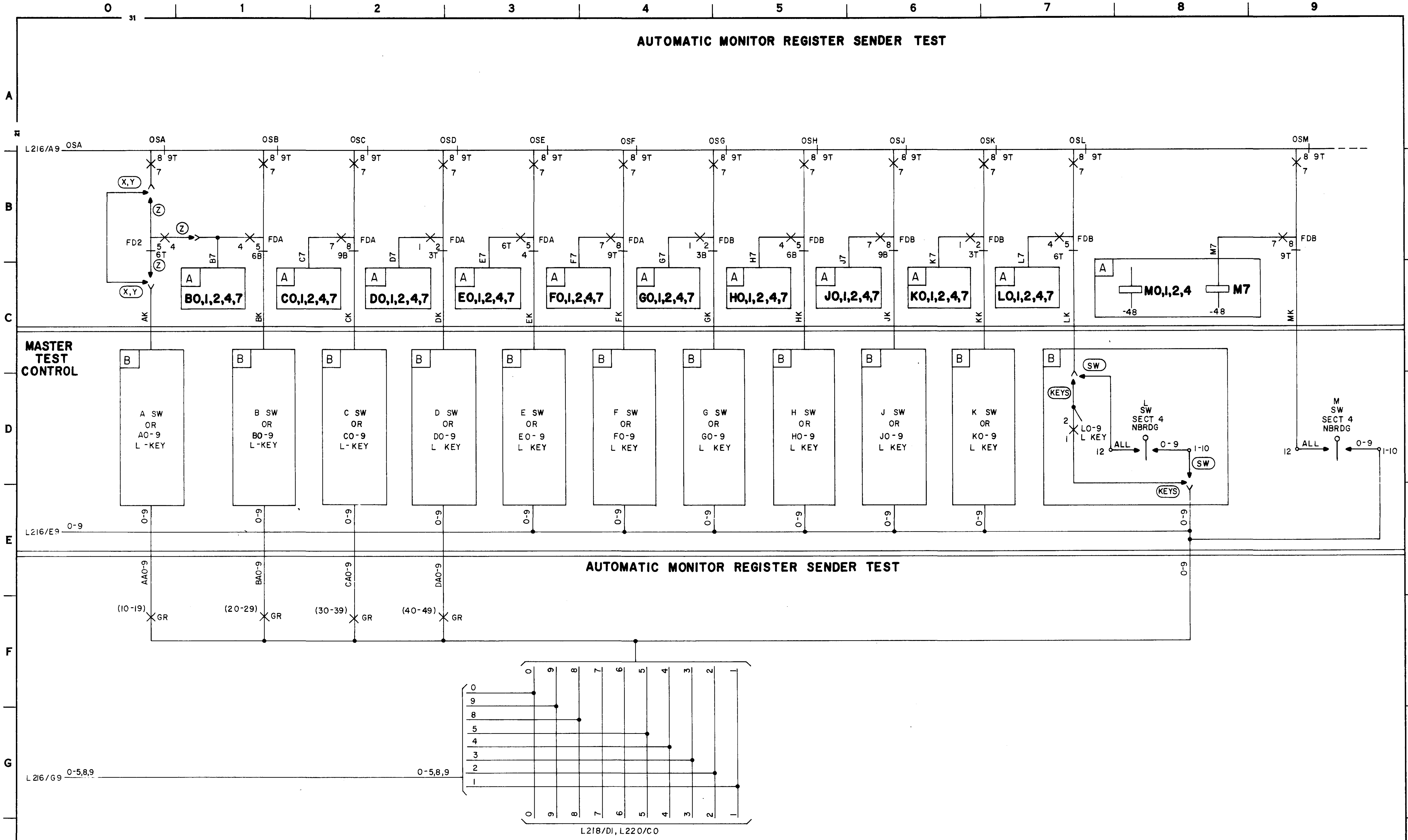
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L216

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

DIGIT CONTROL- REGISTER TESTS

SFD-10-01-L217

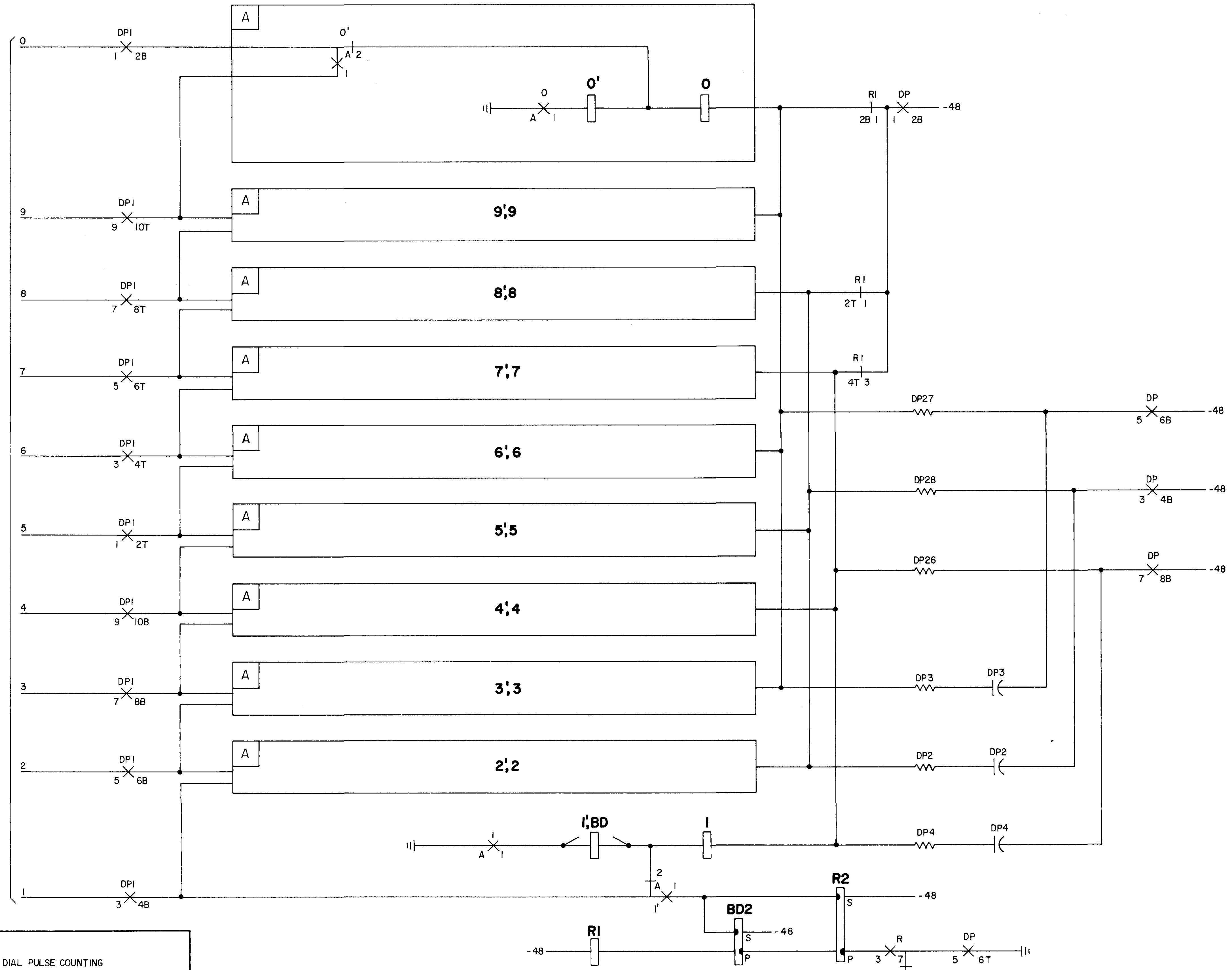
BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-L217

AUTOMATIC MONITORING REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L218

DIAL PULSE COUNTING

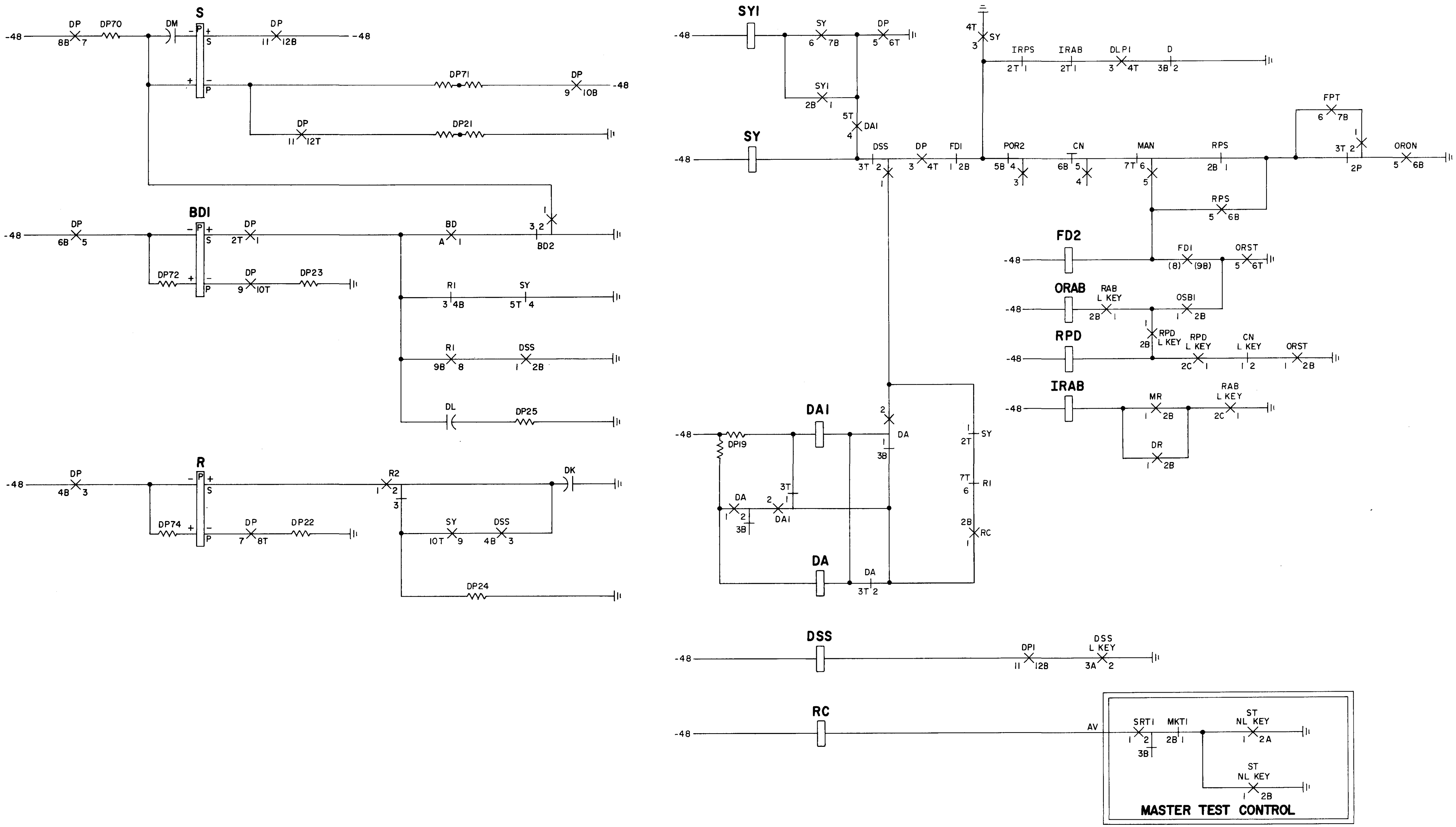
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-L218

AUTOMATIC MONITOR REGISTER SENDER TEST



DIAL PULSE GENERATOR
REGISTER TEST

DWG SIZE
6S

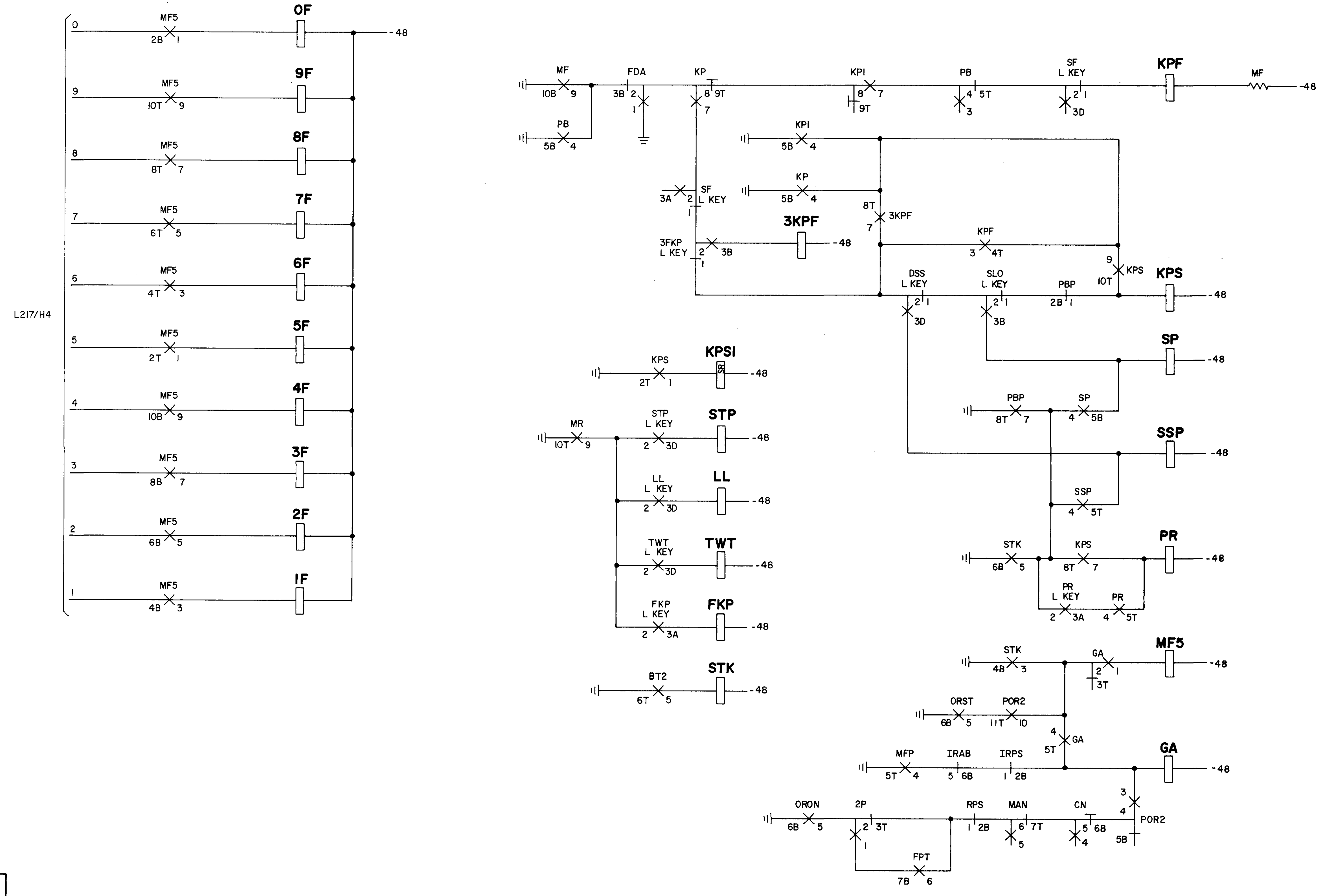
ISSUE
5

BELL LABORATORIES
SFD-10-01-
L219

SFD-10-01-L219

E-7421 (6-75)
PRINTED IN U.S.A.

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L220

MF DIGIT CONTROL

PRINTED IN U. S. A.

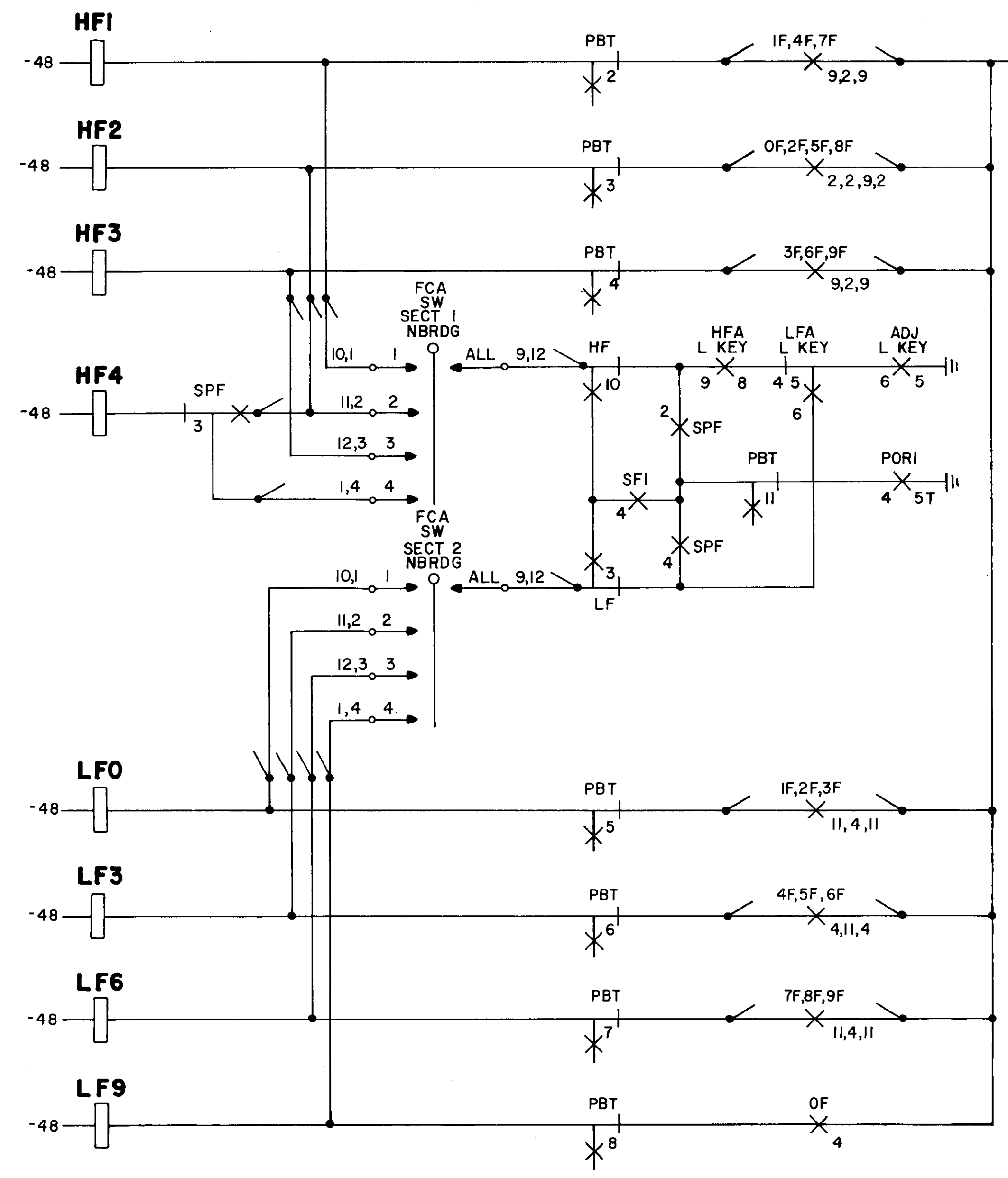
DWG SIZE 6S

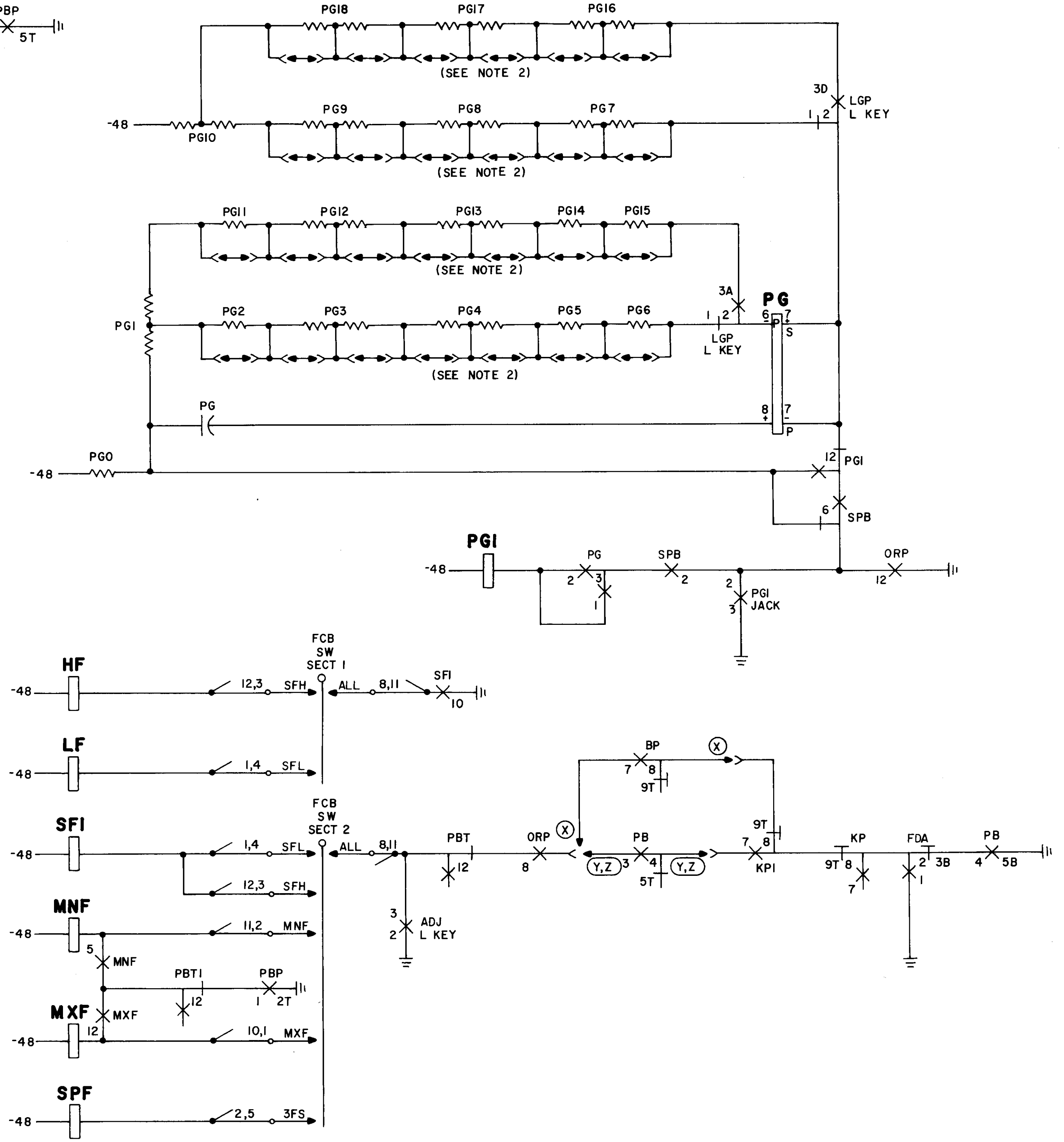
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-71)

SFD-10-01-L220

AUTOMATIC MONITOR REGISTER SENDER TEST





SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓧ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE P KEYS IN THE AMRST.

Ⓨ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE PD SWITCH IN THE AMRST.

Ⓩ WHERE THE OUTPULSING OF PREFIX DIGITS ARE CONTROLLED BY THE APU, BPU, CPU SWITCHES IN MTC.

2. FACILITIES SHALL BE PROVIDED FOR STRAPPING OUT RESISTORS PG2-9 AND PG11-18 AS REQUIRED TO OBTAIN THE PULSING SPEED AND PERCENT BREAK SPECIFIED IN THE CIRCUIT REQUIRMENT TABLE, SD-25680-01.

ISSUE
5

"TOUCH-TONE" CONTROL

SFD-10-01-L221

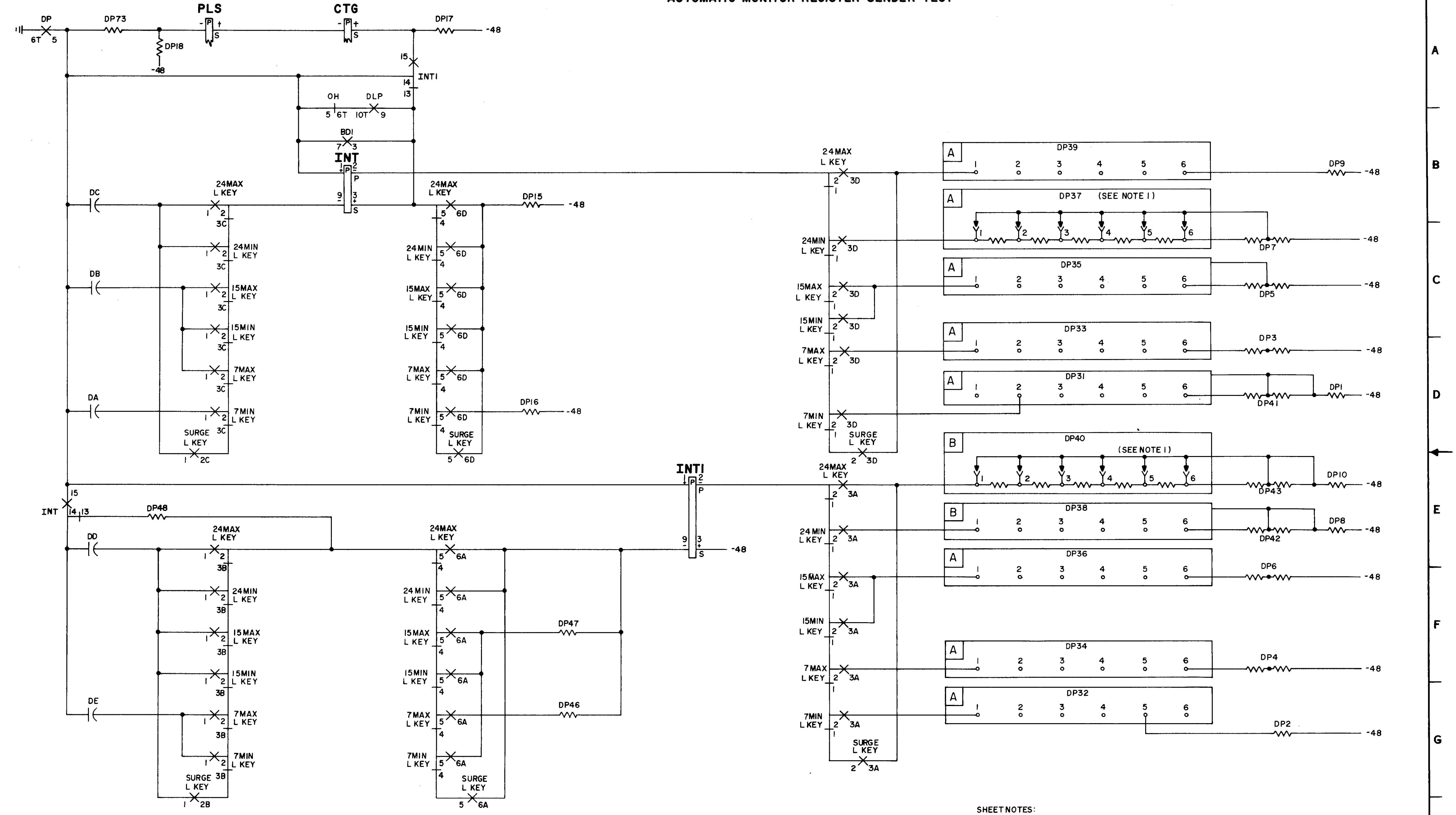
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

E-7481 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. FACILITIES SHALL BE PROVIDED FOR STRAPPING OUT RESISTORS DP30-43 AS REQUIRED TO OBTAIN THE DIAL PULSE SPEED AND PERCENT BREAK SPECIFIED IN CKT REQT TABLE (SEE SD-25680-01, NOTE 203).

ISSUE
5

SFD-10-01-L222

DIAL PULSE GENERATOR

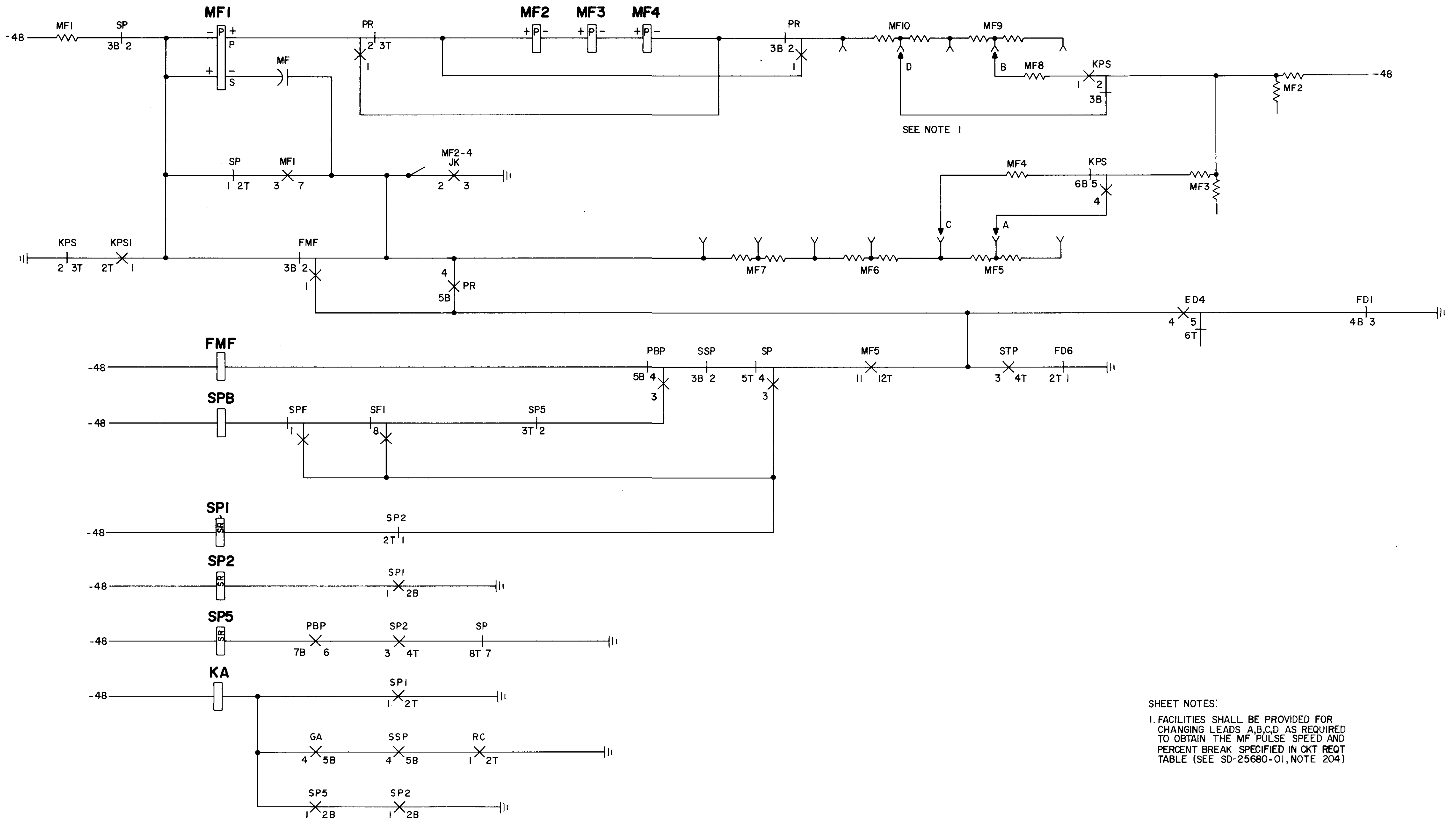
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

SFD-10-01-L222

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. FACILITIES SHALL BE PROVIDED FOR CHANGING LEADS A,B,C,D AS REQUIRED TO OBTAIN THE MF PULSE SPEED AND PERCENT BREAK SPECIFIED IN CKT REQT TABLE (SEE SD-25680-01, NOTE 204)

ISSUE
5

MULTIFREQUENCY
PULSE GENERATOR

SFD-10-01-L223

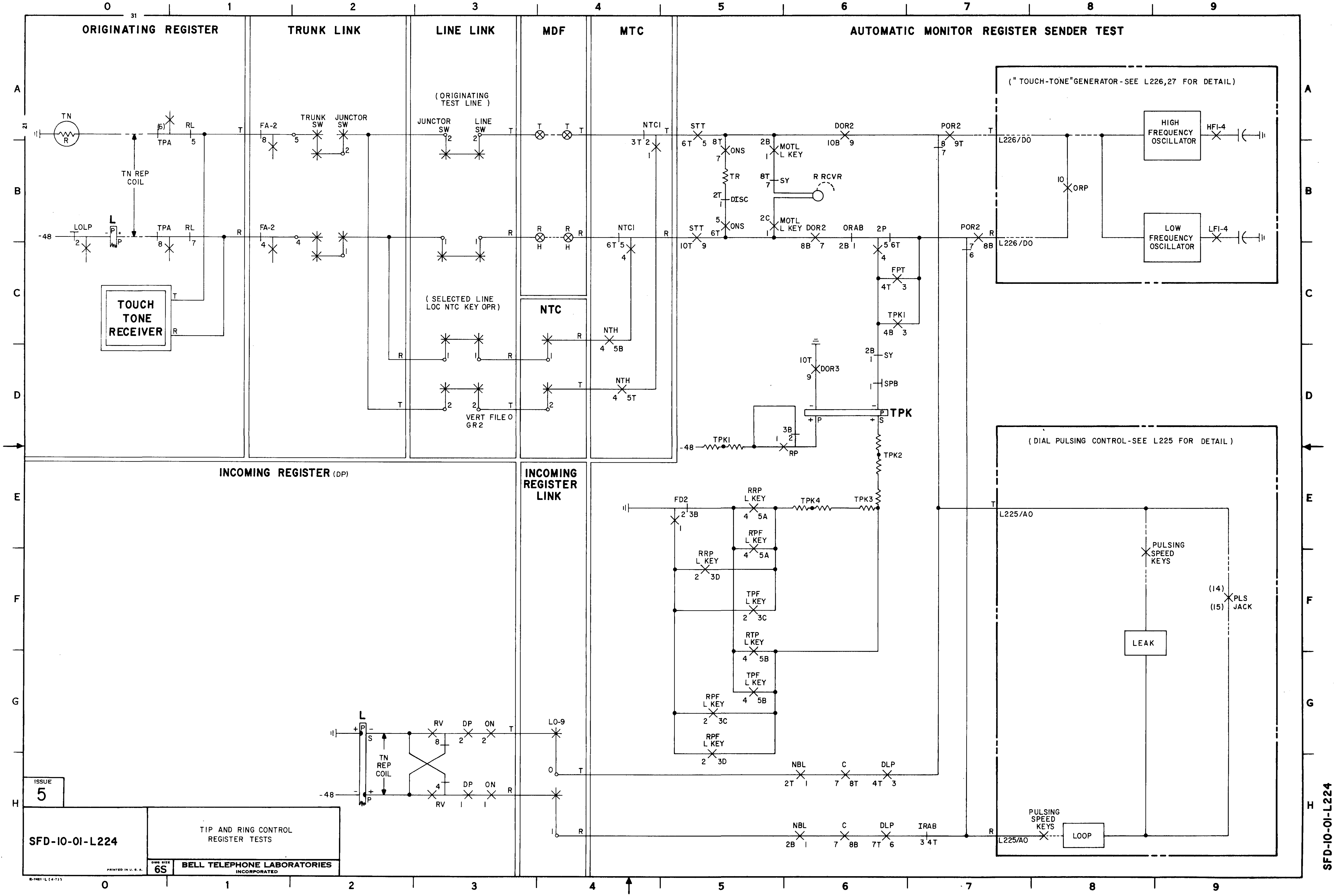
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

SFD-10-01-L223

E-7461 (10-71)



ISSUE
5

SFD-10-01-L224

TIP AND RING CONTROL
REGISTER TESTS

DWG SIZE 6S

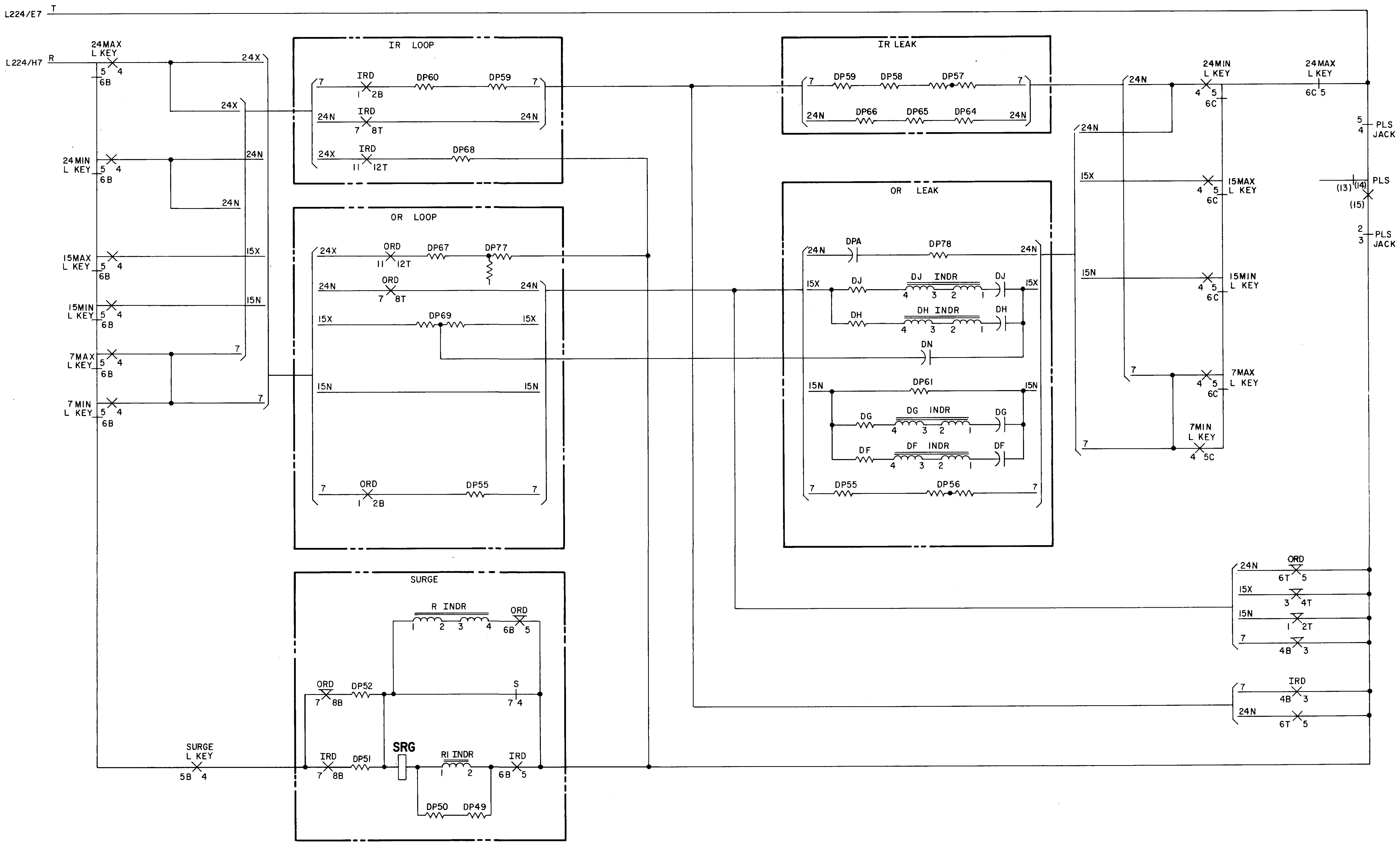
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-73)

SFD-10-01-L224

AUTOMATIC MONITOR REGISTER SENDER TEST

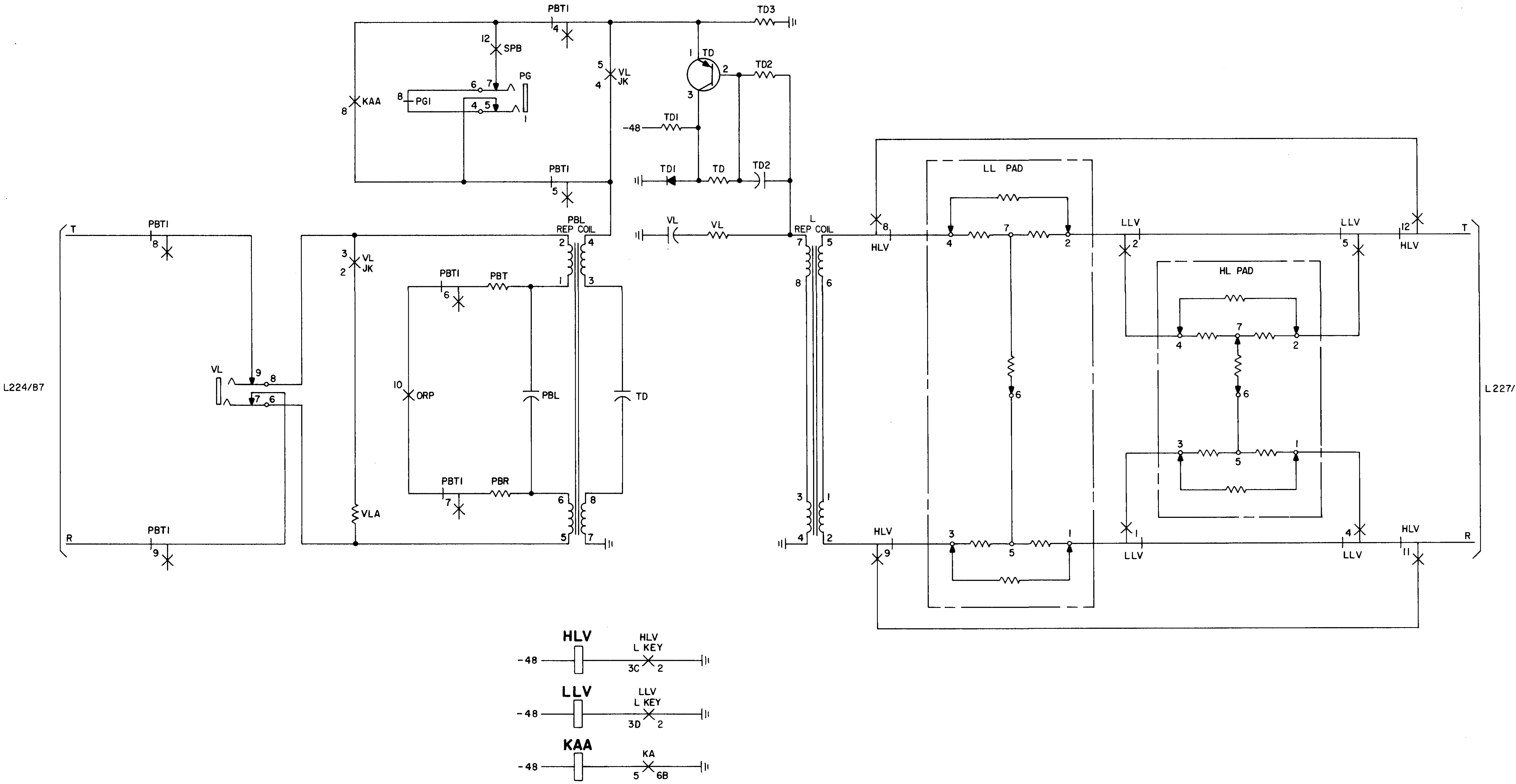


DIAL PULSING CONTROL REGISTER TEST	SFD-10-01-L225	ISSUE 5
BELL TELEPHONE LABORATORIES INCORPORATED	DWG SIZE 6S	PRINTED IN U.S.A.

SFD-10-01-L225

E-7441 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L226

"TOUCH-TONE" GENERATOR

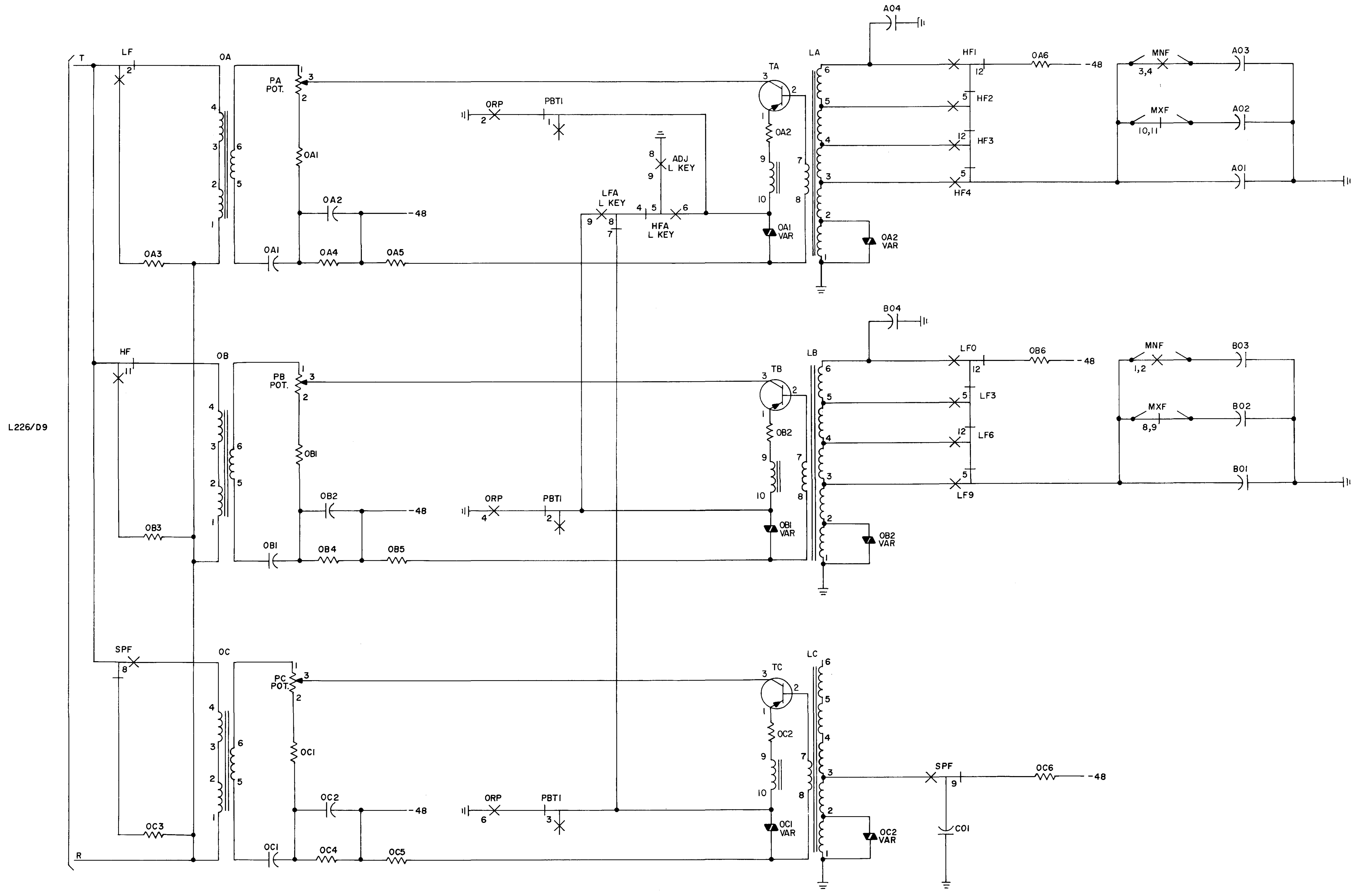
PRINTED IN U.S.A.

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

AUTOMATIC MONITOR REGISTER SENDER TEST



"TOUCH-TONE" GENERATOR

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

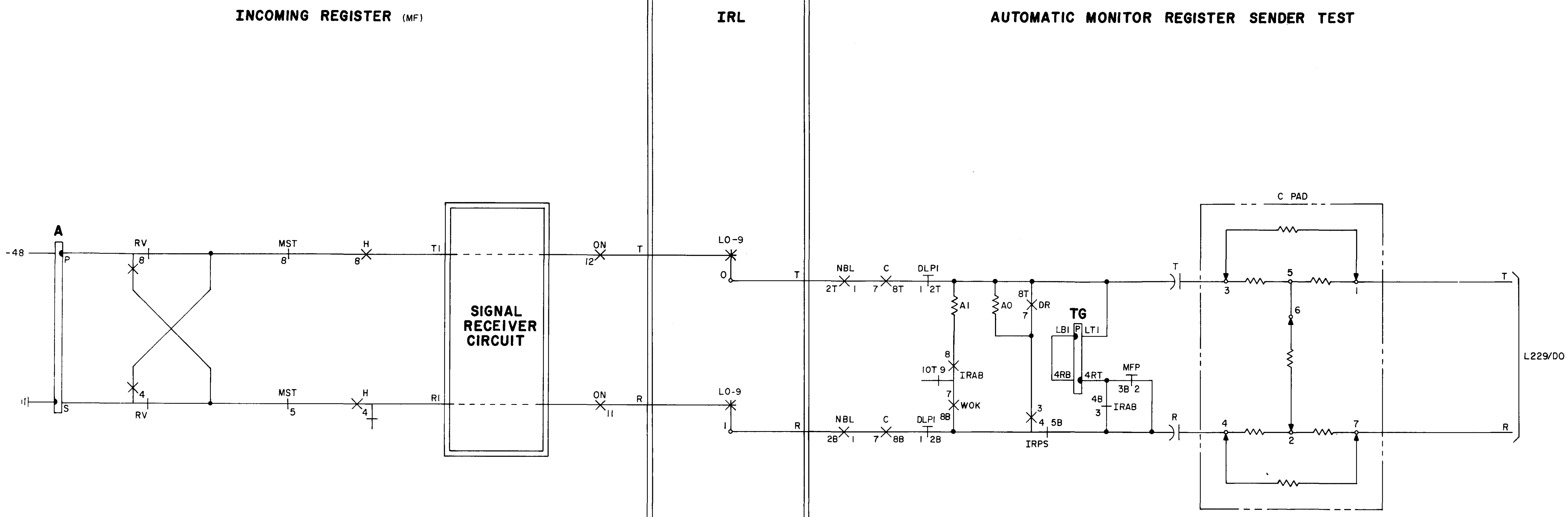
PRINTED IN U.S.A.

SFD-10-01-L227

ISSUE 5

SFD-10-01-L227

E-7461 (10-71)



ISSUE
5

SFD-10-01-L228

TIP AND RING CONTROL
MF INCOMING REGISTER TEST

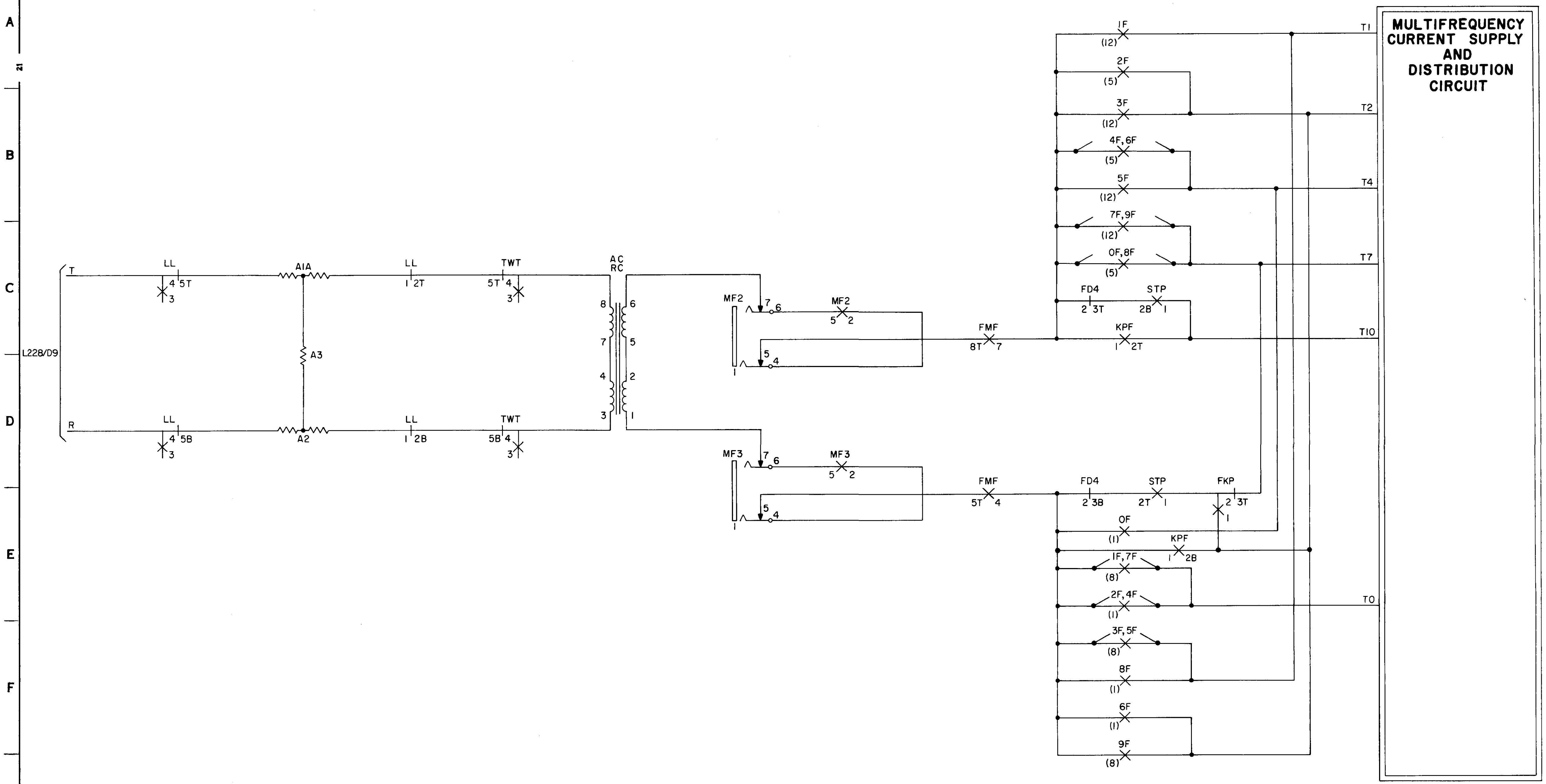
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-77)

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

MULTIFREQUENCY CONTROL

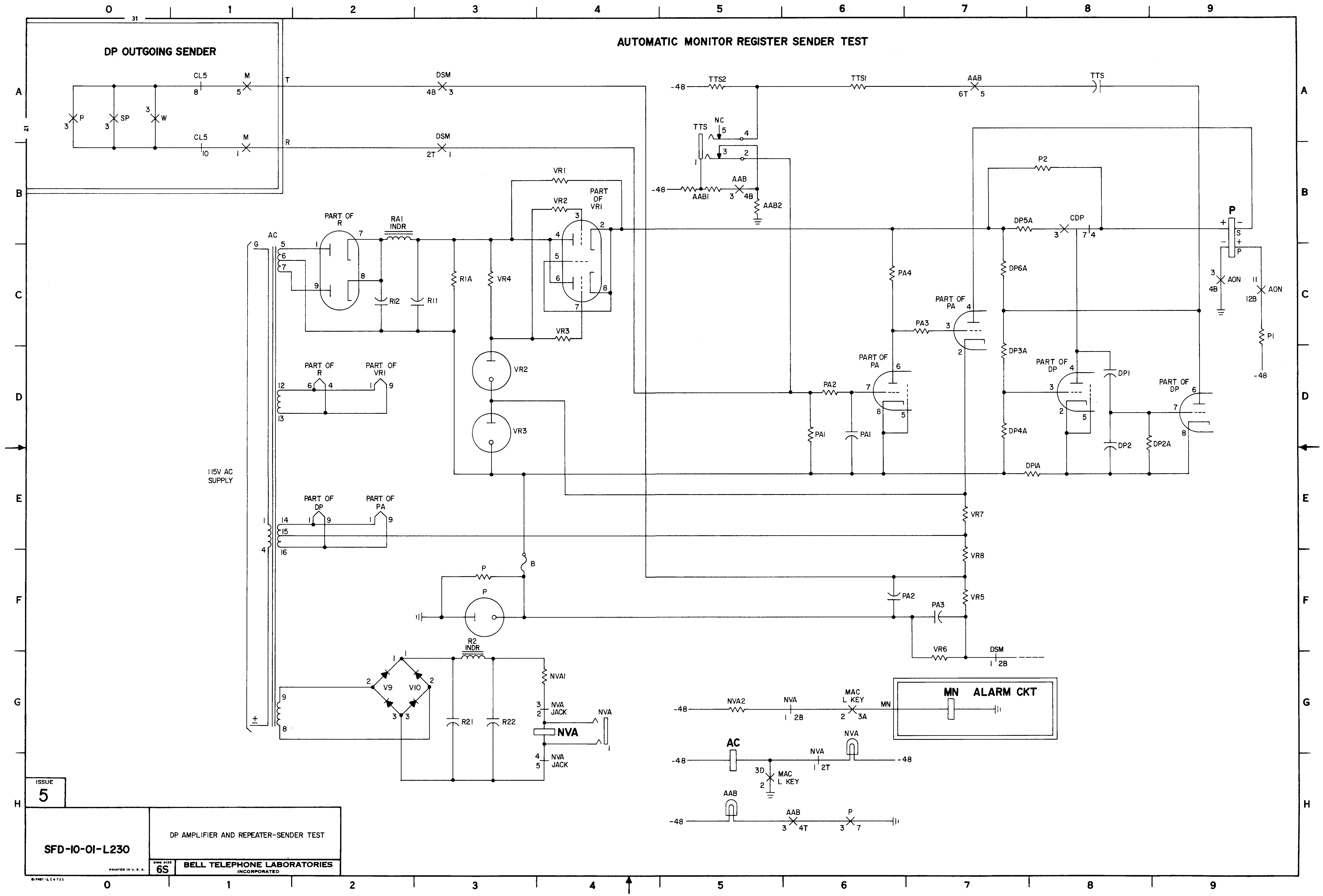
SFD-10-01-L229

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

SFD-10-01-L229



ISSUE
5

SFD-10-01-L230

DP AMPLIFIER AND REPEATER-SENDER TEST

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

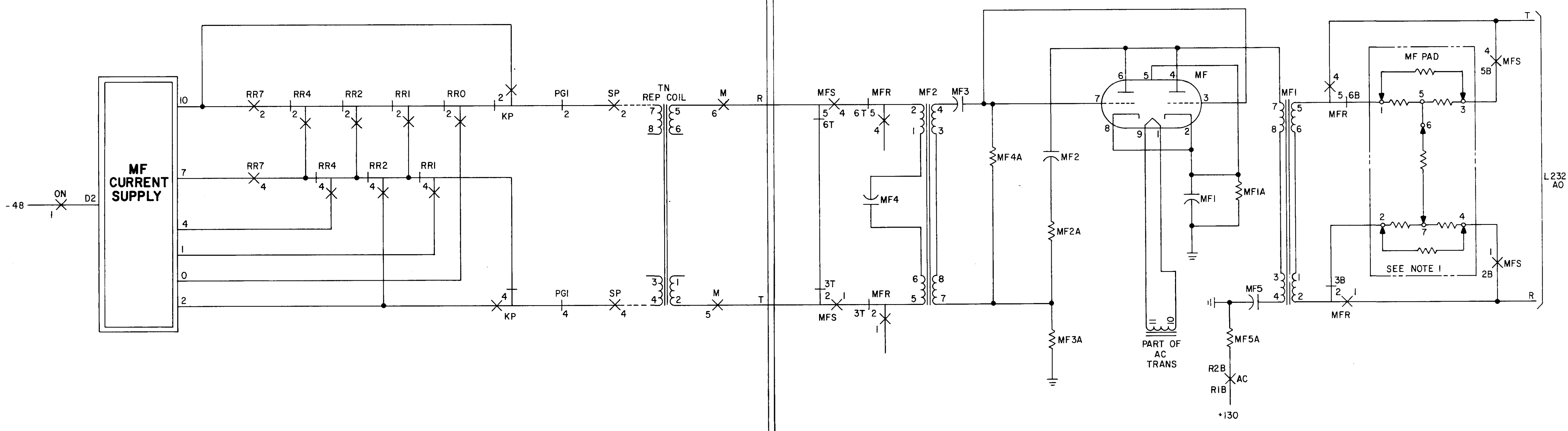
PRINTED IN U.S.A.

E-7421-L (4-73)

SFD-10-01-L230

OUTGOING SENDER (MF)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. SEE SD-25680-01 NOTE 105 FOR PROPER PAD CIRCUIT.

ISSUE
5

MF PULSE AMPLIFIER AND REPEATER

SFD-10-01-L231

BELL TELEPHONE LABORATORIES INCORPORATED

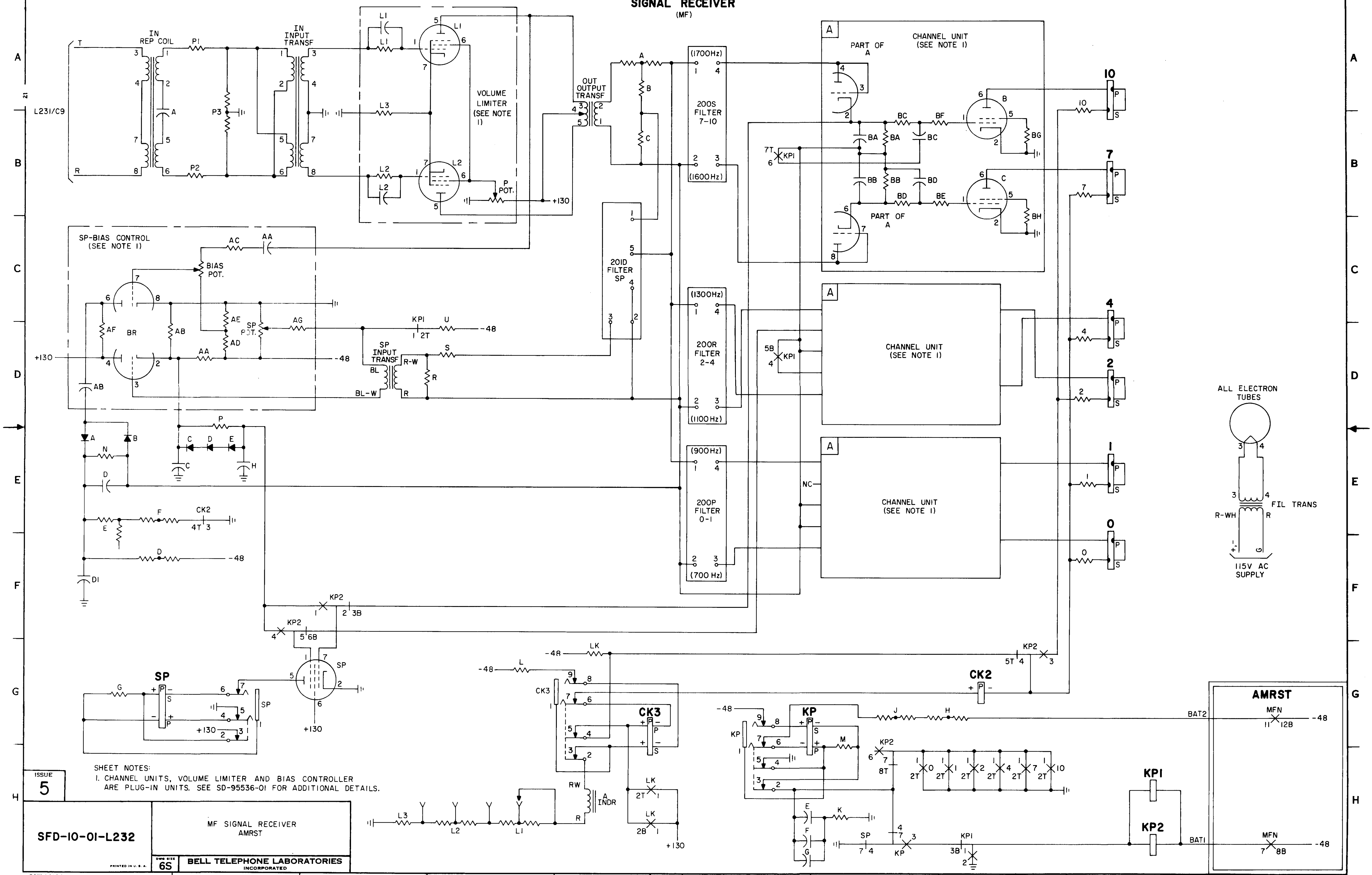
DWG SIZE 6S

PRINTED IN U.S.A.

E-7461 (10-71)

SFD-10-01-L231

SIGNAL RECEIVER
(MF)



SHEET NOTES:
1. CHANNEL UNITS, VOLUME LIMITER AND BIAS CONTROLLER ARE PLUG-IN UNITS. SEE SD-95536-01 FOR ADDITIONAL DETAILS.

ISSUE
5

SFD-10-01-L232

MF SIGNAL RECEIVER
AMRST

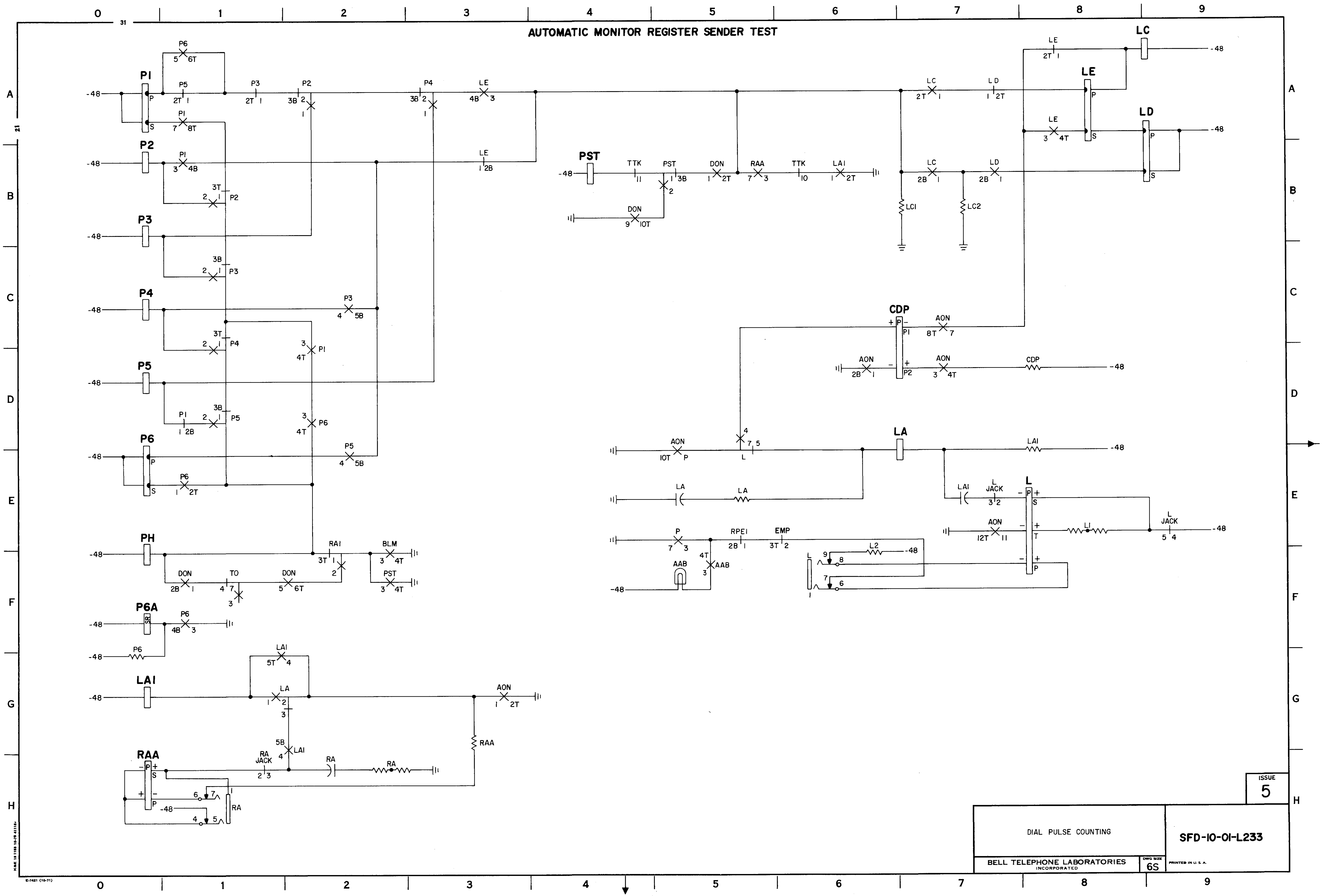
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7451-L (4-73)

SFD-10-01-L232



DIAL PULSE COUNTING

SFD-10-01-L233

ISSUE 5

BELL TELEPHONE LABORATORIES INCORPORATED

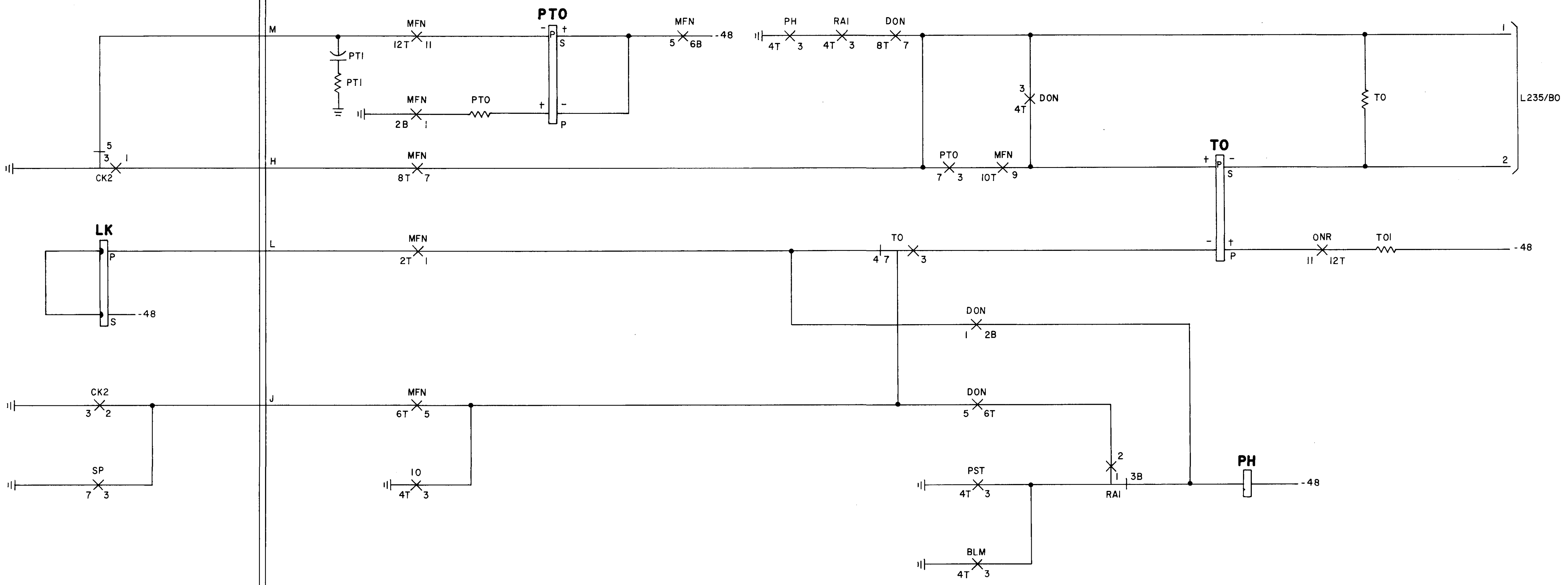
DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-L233

MF RECIEVER

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L234

STEERING CONTROL SENDER TEST

PRINTED IN U.S.A.

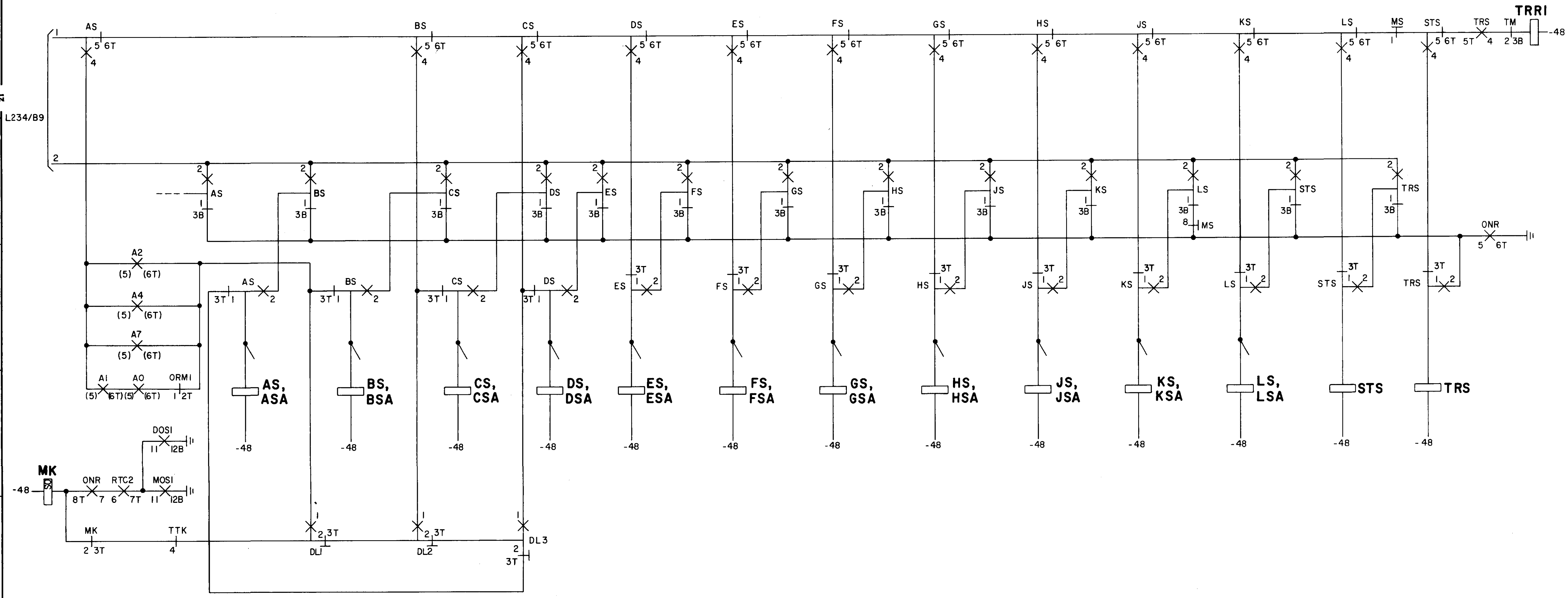
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L234

AUTOMATIC MONITOR REGISTER SENDER TEST



DIGIT STEERING REGISTER TEST

SFD-10-01-L235

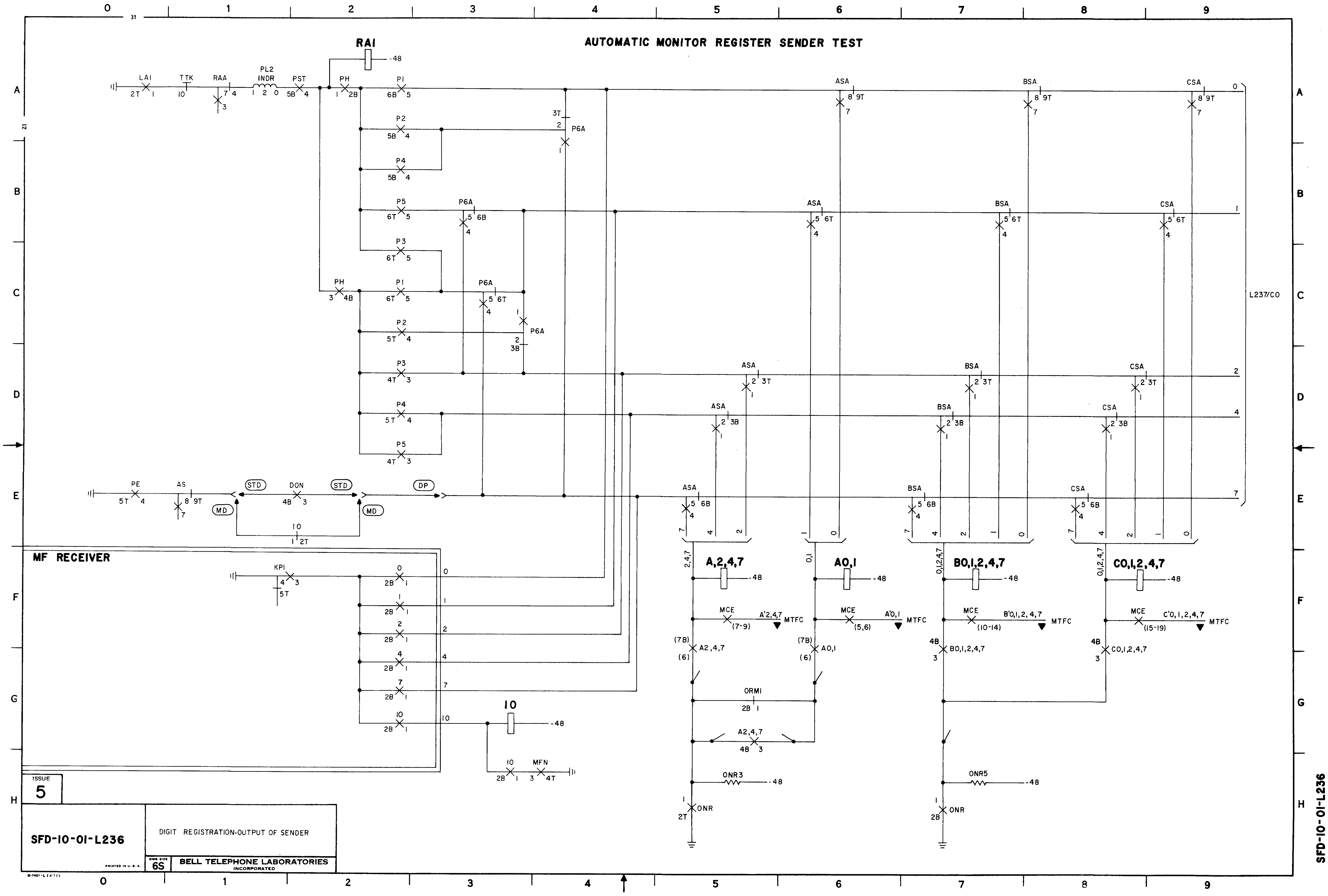
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

ISSUE 5

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L236

DIGIT REGISTRATION-OUTPUT OF SENDER

PRINTED IN U.S.A.

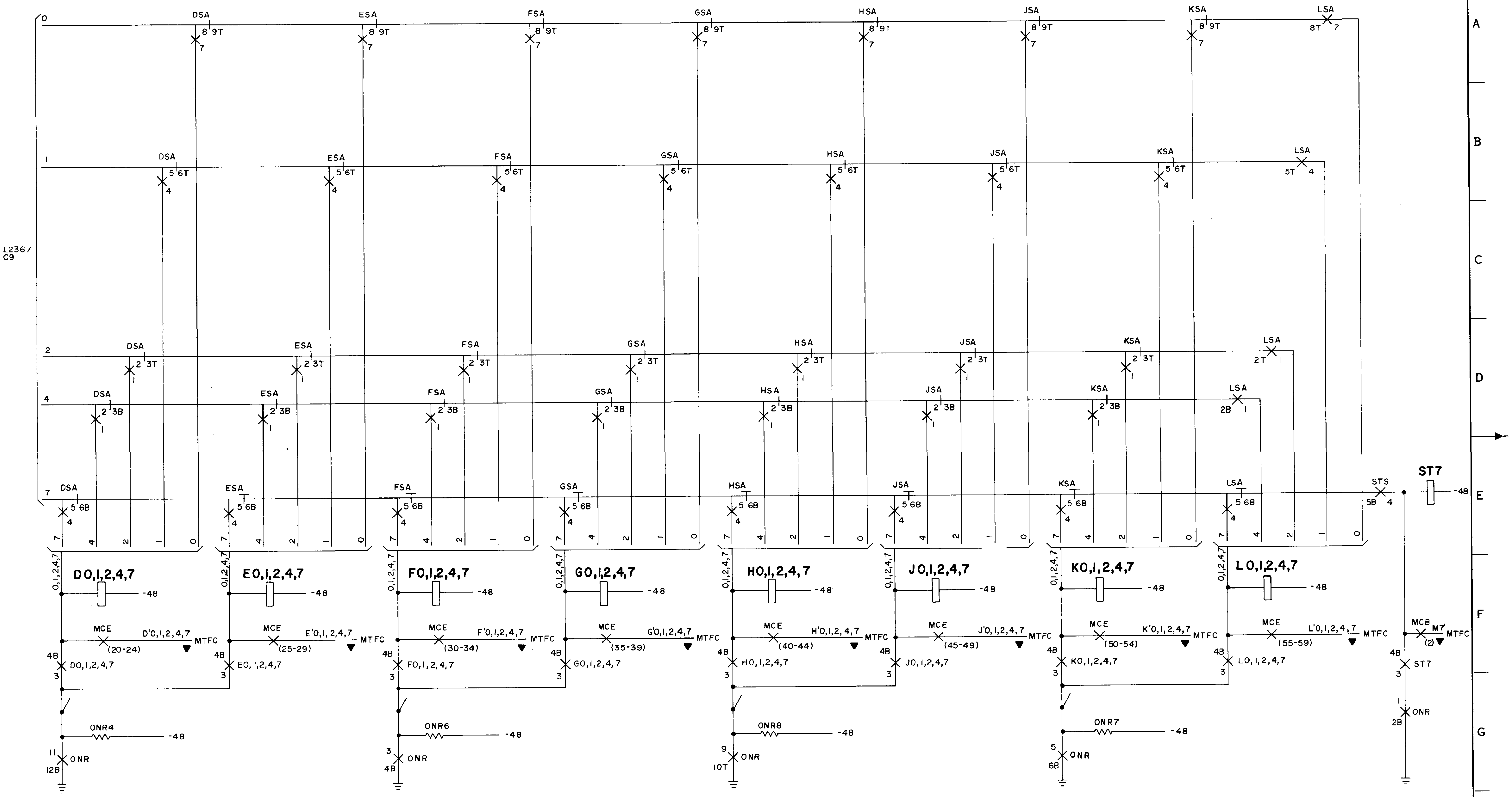
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L236

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

DIGIT REGISTRATION SENDER TEST

SFD-10-01-L237

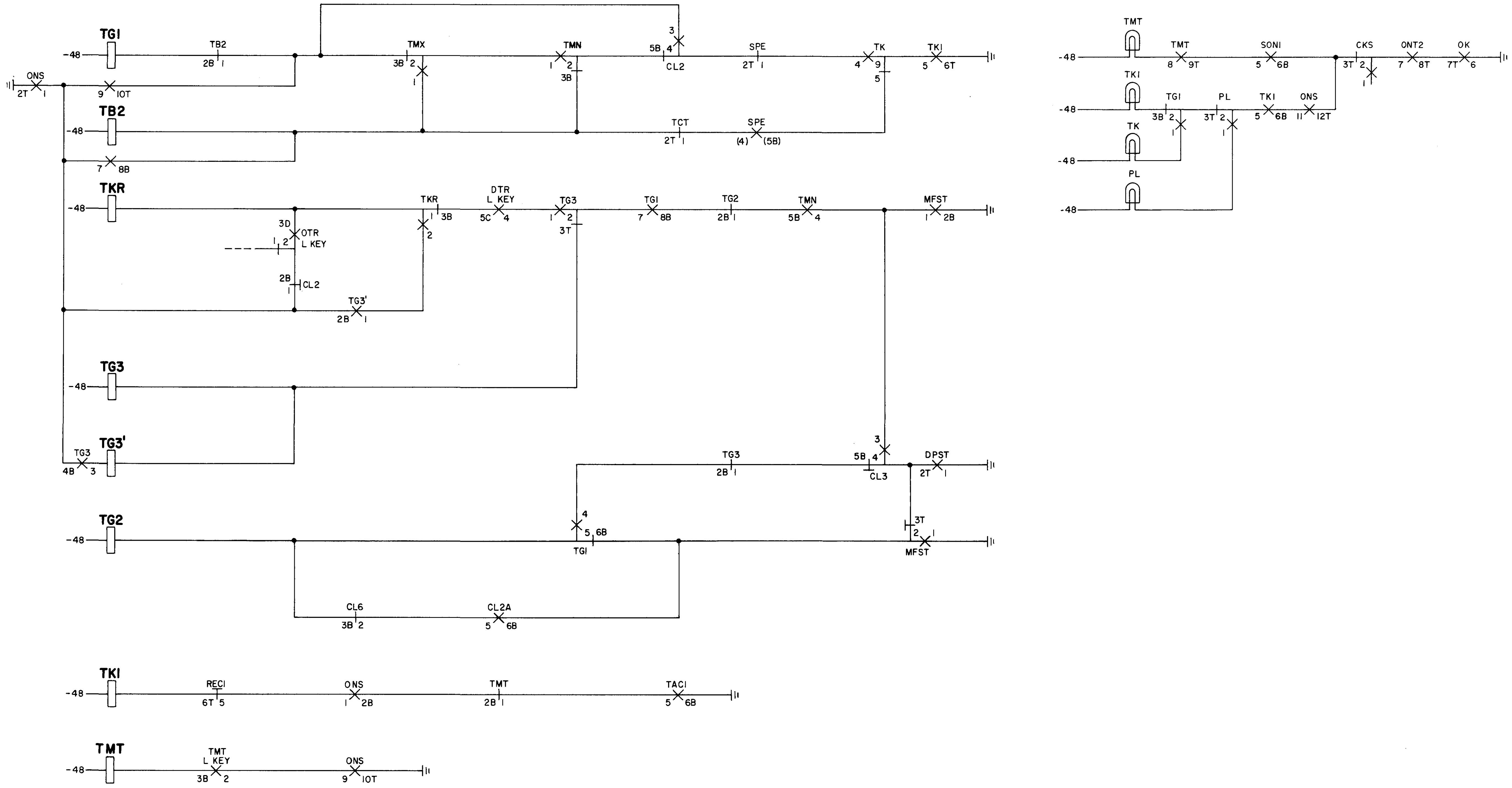
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

SFD-10-01-L237

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L238

SENDER TEST

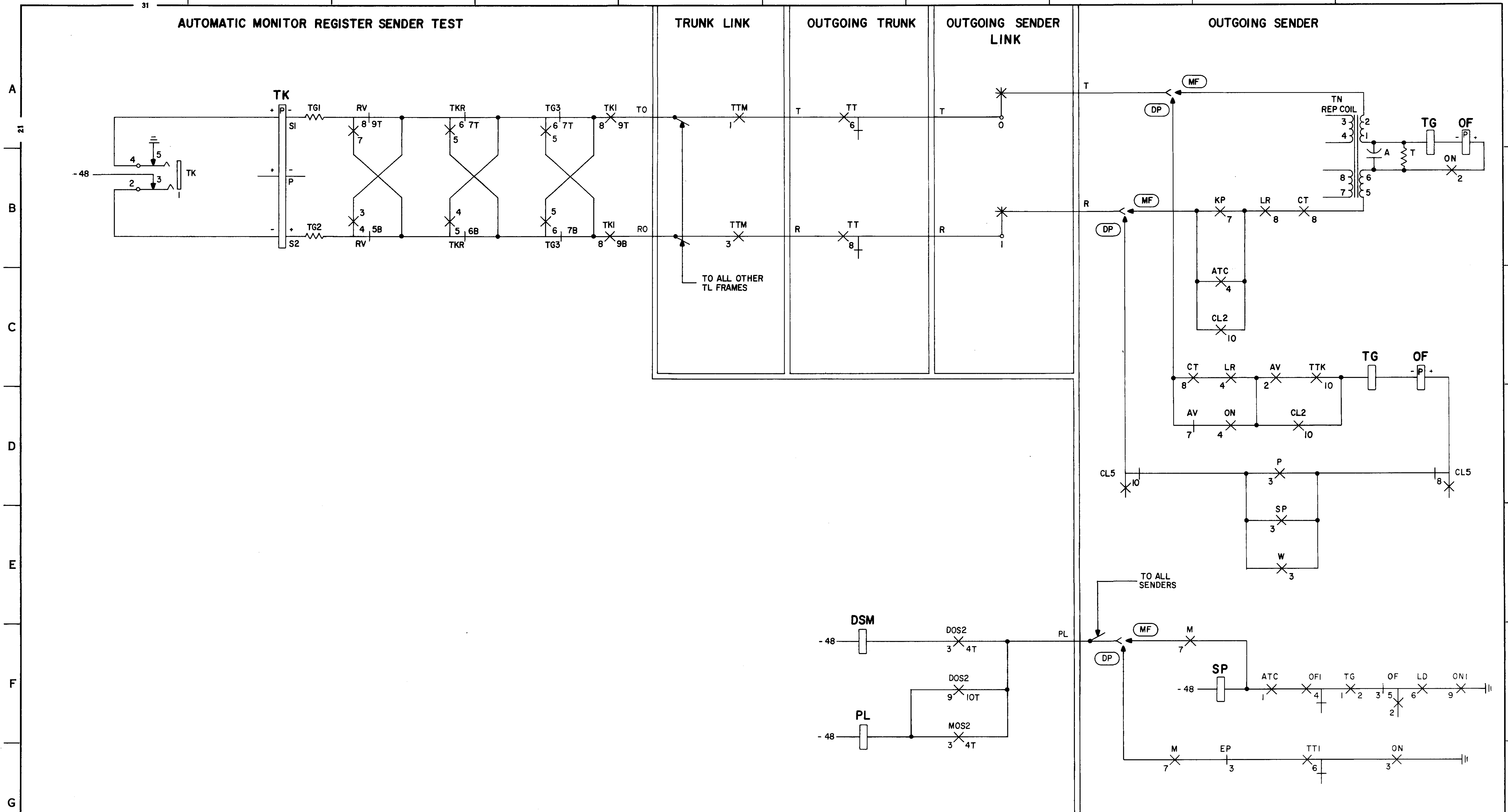
PRINTED IN U.S.A.

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L238



SENDER TEST

SFD-10-01-L239

ISSUE
5

BELL TELEPHONE LABORATORIES
INCORPORATED

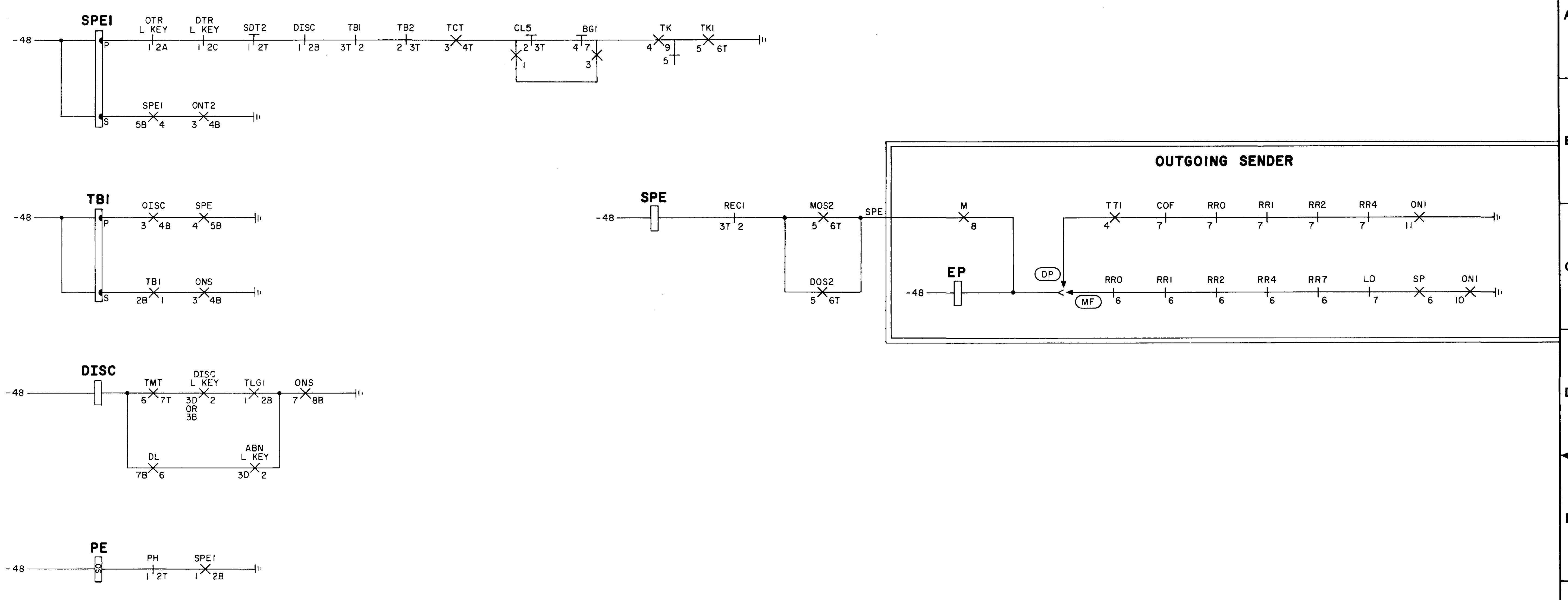
DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-L239

E-7481 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L240

PRINTED IN U.S.A.

SENDER TEST

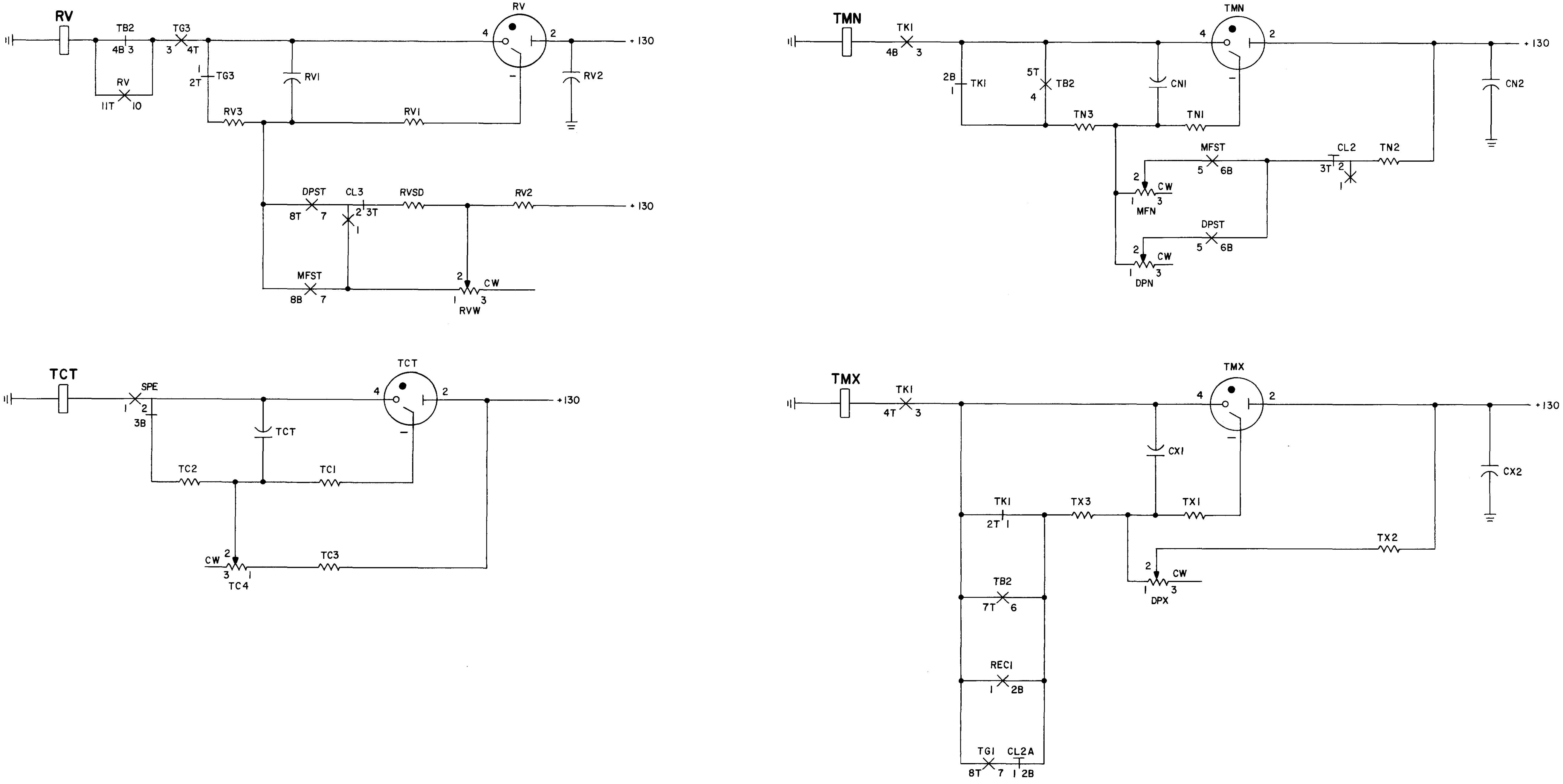
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L240

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

TIMING - SENDER TEST

SFD-10-01-L241

BELL TELEPHONE LABORATORIES
INCORPORATED

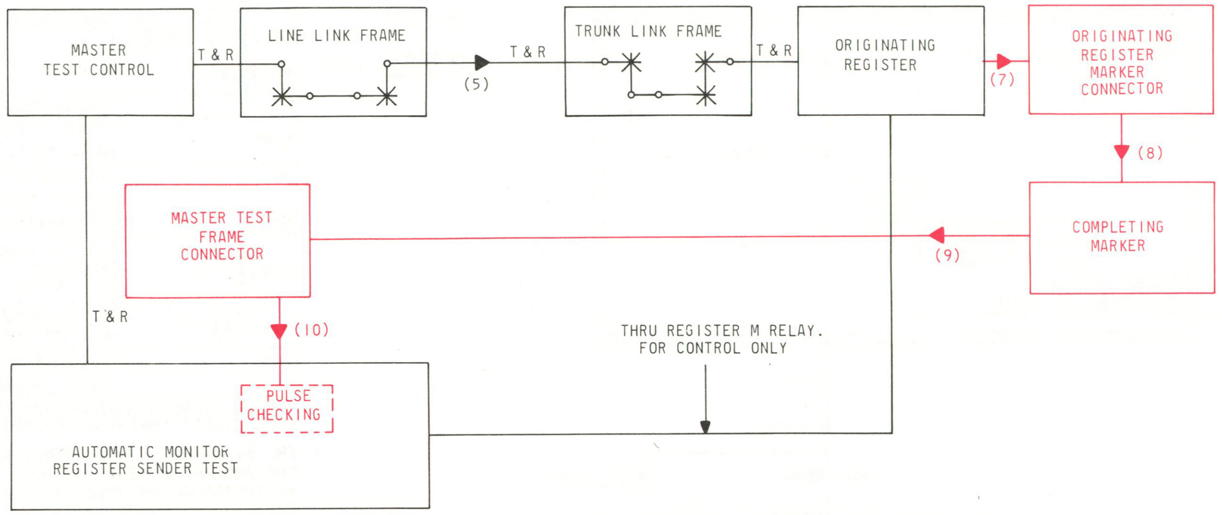
DWG SIZE
6S

PRINTED IN U.S.A.

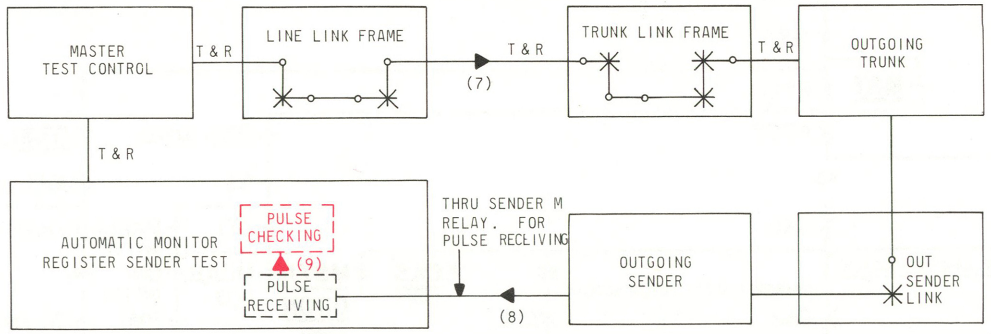
SFD-10-01-L241

E-7421 (10-71)

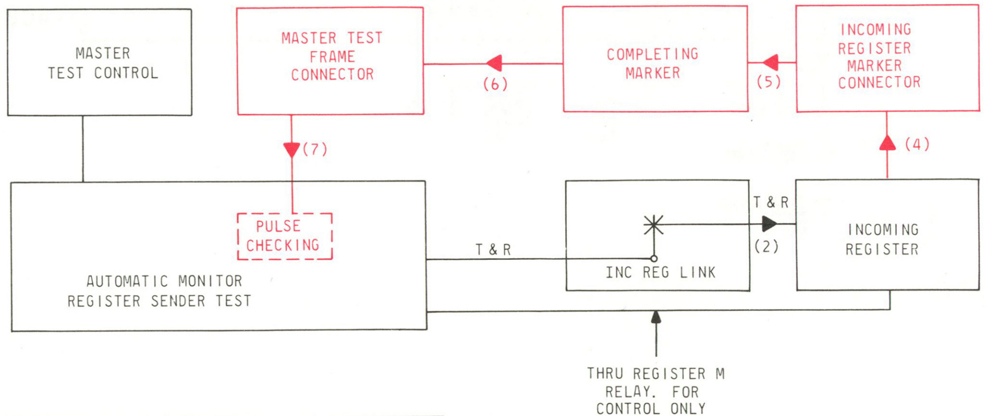
ORIGINATING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR


MASTER TEST CONTROL
T & R
LINE LINK FRAME
(5)
T & R
TRUNK LINK FRAME
T & R
ORIGINATING REGISTER
(7)
ORIGINATING REGISTER MARKER CONNECTOR
(8)
MASTER TEST FRAME CONNECTOR
(9)
COMPLETING MARKER
T & R
(10)
THRU REGISTER M RELAY. FOR CONTROL ONLY
PULSE CHECKING
AUTOMATIC MONITOR REGISTER SENDER TEST

SENDER CLASS OF TEST USING AUTOMATIC MONITOR



INCOMING REGISTER CLASS OF TEST USING AUTOMATIC MONITOR


MASTER TEST CONTROL
MASTER TEST FRAME CONNECTOR
(6)
COMPLETING MARKER
(5)
INCOMING REGISTER MARKER CONNECTOR
(7)
(4)
PULSE CHECKING
AUTOMATIC MONITOR REGISTER SENDER TEST
T & R
INC REG LINK
T & R
(2)
INCOMING REGISTER
THRU REGISTER M RELAY. FOR CONTROL ONLY

INDEX

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L303	SEQUENCE CHART - ORIGINATING REGISTER TEST RELEASE
L304	SEQUENCE CHART - SDR TEST - CHECKING AND TEST COMPLETION
L305	SEQUENCE CHART - SDR TEST RELEASE
L306	SEQUENCE CHART - IR TEST - CHECKING AND TEST COMPLETION
L307	SEQUENCE CHART - IR TEST RELEASE
L308	REGISTER TEST
L309	MTFC CONTROL
L310	LINE LINK IDENTIFICATION - ORIGINATING REGISTER TEST
L311	INPUTS FROM ORIGINATING REGISTER
L312	INPUTS FROM INCOMING REGISTER
L313	INPUTS FROM INCOMING REGISTER
L314	TRUNK LINK FRAME IDENTIFICATION INCOMING REGISTER TEST
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L321	RESERVED
L322	OR, SDR TEST - COMPLETION CHECK
L323	IR TEST - COMPLETION CHECK
L324	DIGIT REGISTRATION CHECK
L325	TEST COMPLETION
L326	TROUBLE RELEASE

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

PART L3
CHECKING, TEST COMPLETION
AND RELEASE

DWG SIZE
6S

ISSUE
5

BELL LABORATORIES
SFD-10-01-
L301

SFD-10-01-L301
2 SHEETS, SHEET 1

K&E 19 1153 2-77 41397

E-7421 (6-75)
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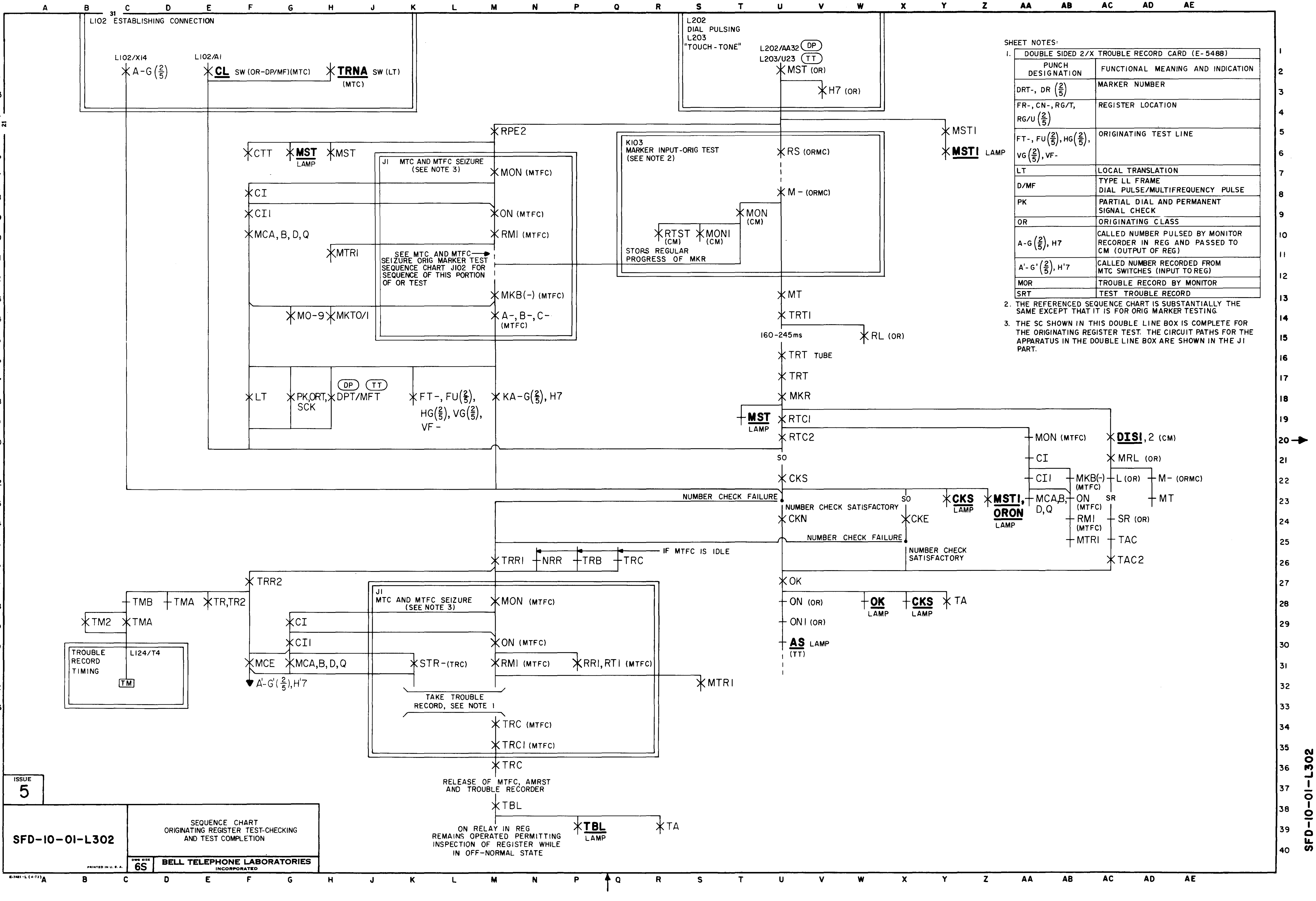

SHEET NOTES:

1.

DOUBLE SIDED 2/X TROUBLE RECORD CARD (E-5488)	
PUNCH DESIGNATION	FUNCTIONAL MEANING AND INDICATION
DRT-, DR $(\frac{2}{5})$	MARKER NUMBER
FR-, CN-, RG/T, RG/U $(\frac{2}{5})$	REGISTER LOCATION
FT-, FU$(\frac{2}{5})$, HG$(\frac{2}{5})$, VG$(\frac{2}{5})$, VF-	ORIGINATING TEST LINE
LT	LOCAL TRANSLATION
D/MF	TYPE LL FRAME DIAL PULSE/MULTIFREQUENCY PULSE
PK	PARTIAL DIAL AND PERMANENT SIGNAL CHECK
OR	ORIGINATING CLASS
A-G$(\frac{2}{5})$, H7	CALLED NUMBER PULSED BY MONITOR RECORDER IN REG AND PASSED TO CM (OUTPUT OF REG)
A'-G'$(\frac{2}{5})$, H'7	CALLED NUMBER RECORDED FROM MTC SWITCHES (INPUT TO REG)
MOR	TROUBLE RECORD BY MONITOR
SRT	TEST TROUBLE RECORD

2. THE REFERENCED SEQUENCE CHART IS SUBSTANTIALLY THE SAME EXCEPT THAT IT IS FOR ORIG MARKER TESTING.

3. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE ORIGINATING REGISTER TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE
5

SFD-10-01-L302

SEQUENCE CHART
ORIGINATING REGISTER TEST-CHECKING
AND TEST COMPLETION

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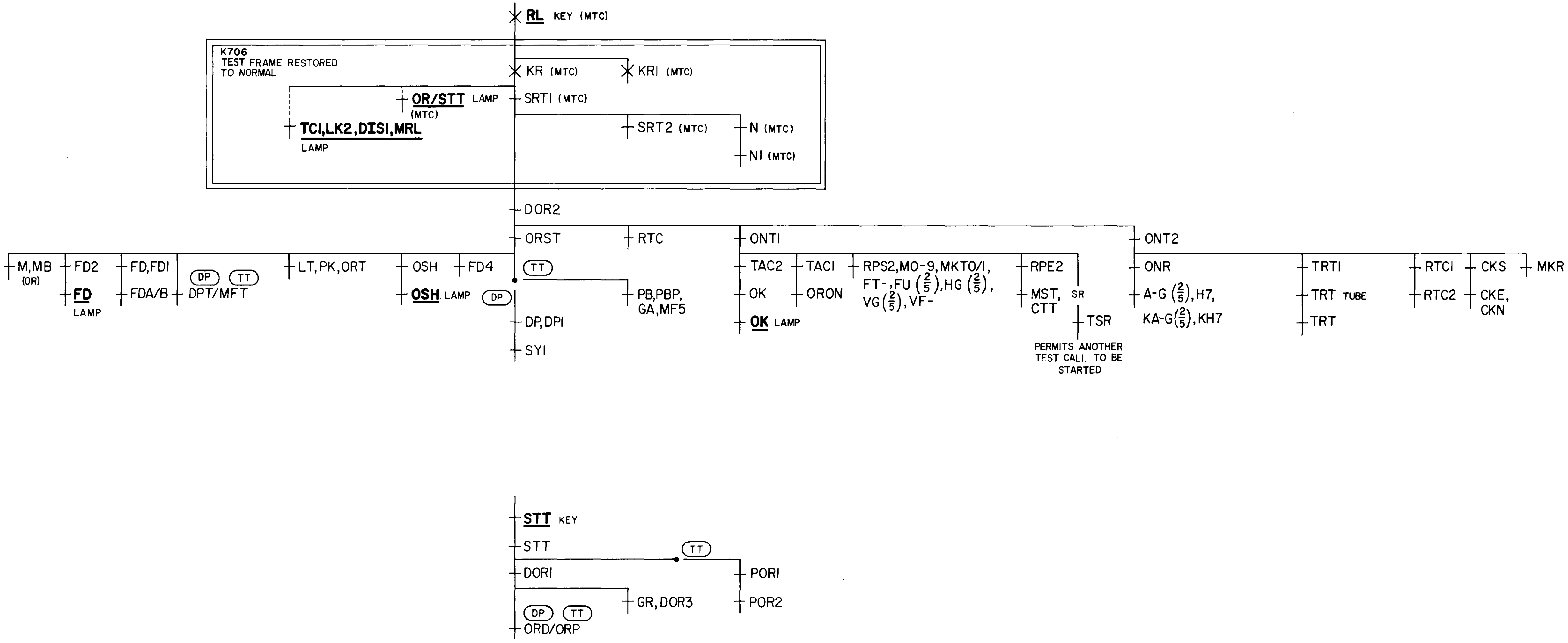
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)



SEQUENCE CHART
ORIGINATING REGISTER TEST
RELEASE

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- L303

SFD-10-01-L303

BRUNING 44-131 28142

E-7421-B (6-75)
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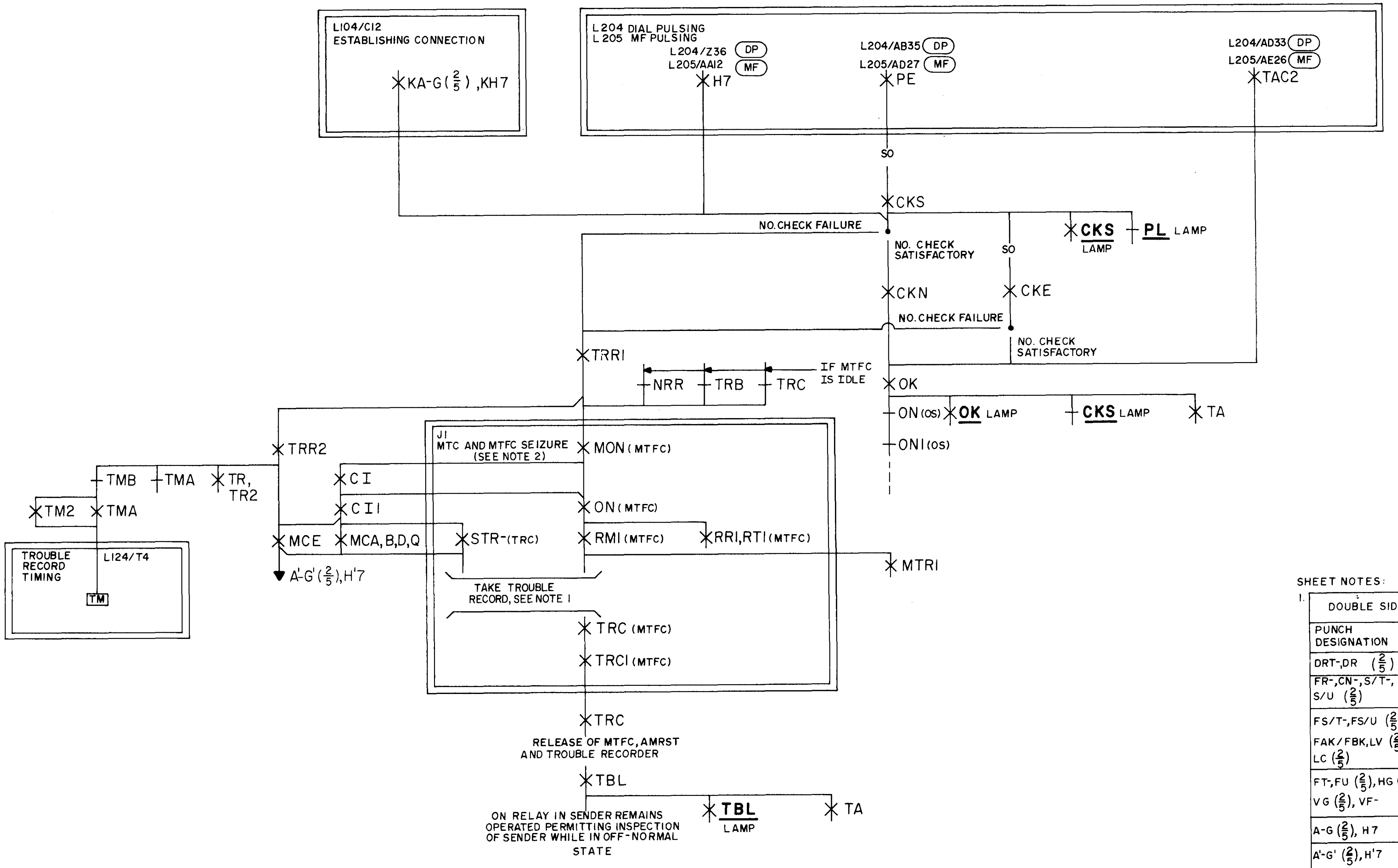

SHEET NOTES:

1.

DOUBLE SIDED $\frac{2}{X}$ TROUBLE RECORD CARD (E-5488)	
PUNCH DESIGNATION	FUNCTIONAL MEANING AND INDICATION
DRT-,DR $(\frac{2}{5})$	MARKER NUMBER
FR-,CN-,S/T-, S/U $(\frac{2}{5})$	SENDER LOCATION
FS/T-,FS/U $(\frac{2}{5})$, FAK/FBK,LV $(\frac{2}{5})$, LC $(\frac{2}{5})$	OUTGOING TRUNK LOCATION
FT-,FU $(\frac{2}{5})$, HG $(\frac{2}{5})$, VG $(\frac{2}{5})$, VF-	ORIGINATING TEST LINE
A-G $(\frac{2}{5})$, H7	CALLED NUMBER RECORDED FROM MTC SWITCHES (INPUT TO OS)
A'-G' $(\frac{2}{5})$, H'7	CALLED NUMBER PULSED BY SENDER RECORDED IN MONITOR (OUTPUT OF OS)
MOS	TROUBLE RECORD BY MONITOR
SRT	TEST TROUBLE RECORD

2. THE SC SHOWN IN THE DOUBLE LINE BOX IS COMPLETE FOR THE SENDER TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE
5

SFD-10-01-L304

SEQUENCE CHART
SDR TEST-CHECKING AND TEST
COMPLETION

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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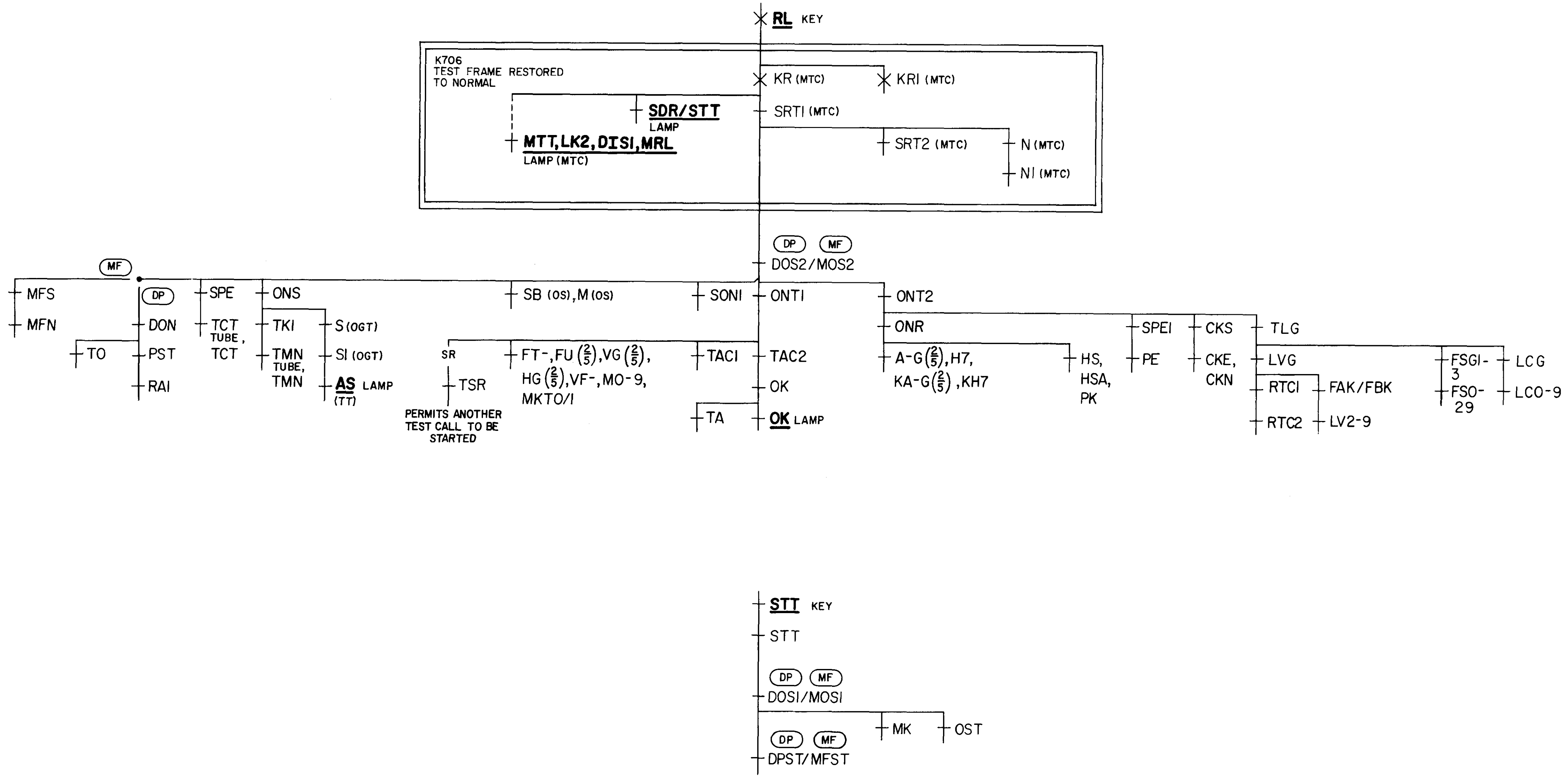
E-3481-L (4-73)



ISSUE
5

SEQUENCE CHART
SDR TEST RELEASE

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

SFD-10-01-L305

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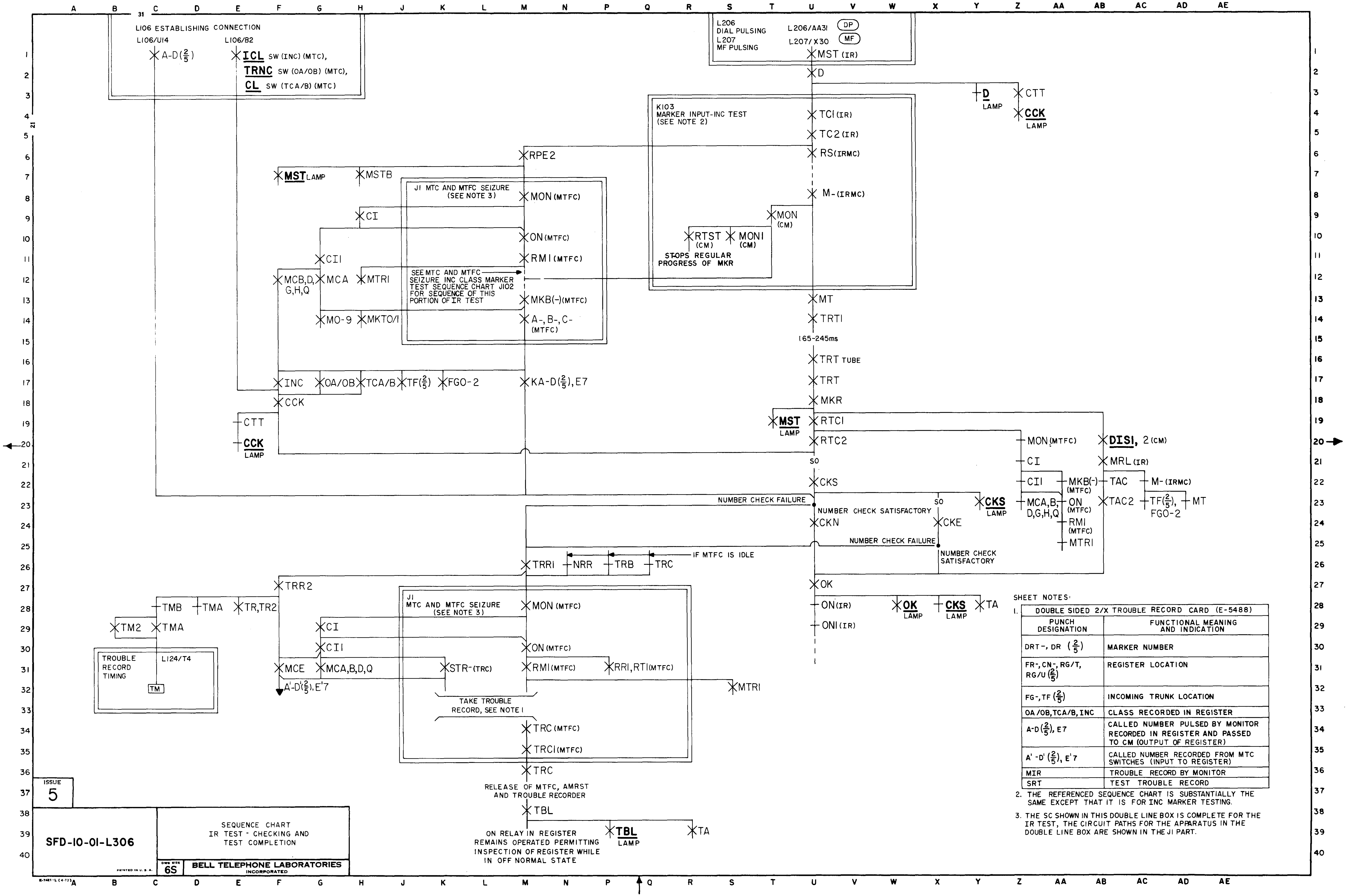
BRUNING 44-131 24092
E-7421-B (10-71)



SHEET NOTES:

1.

DOUBLE SIDED 2/X TROUBLE RECORD CARD (E-5488)	
PUNCH DESIGNATION	FUNCTIONAL MEANING AND INDICATION
DRT-, DR ($\frac{2}{5}$)	MARKER NUMBER
FR-, CN-, RG/T, RG/U ($\frac{2}{5}$)	REGISTER LOCATION
FG-, TF ($\frac{2}{5}$)	INCOMING TRUNK LOCATION
OA/OB, TCA/B, INC	CLASS RECORDED IN REGISTER
A-D ($\frac{2}{5}$), E7	CALLED NUMBER PULSED BY MONITOR RECORDED IN REGISTER AND PASSED TO CM (OUTPUT OF REGISTER)
A'-D' ($\frac{2}{5}$), E'7	CALLED NUMBER RECORDED FROM MTC SWITCHES (INPUT TO REGISTER)
MIR	TROUBLE RECORD BY MONITOR
SRT	TEST TROUBLE RECORD

2. THE REFERENCED SEQUENCE CHART IS SUBSTANTIALLY THE SAME EXCEPT THAT IT IS FOR INC MARKER TESTING.

3. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE IR TEST, THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

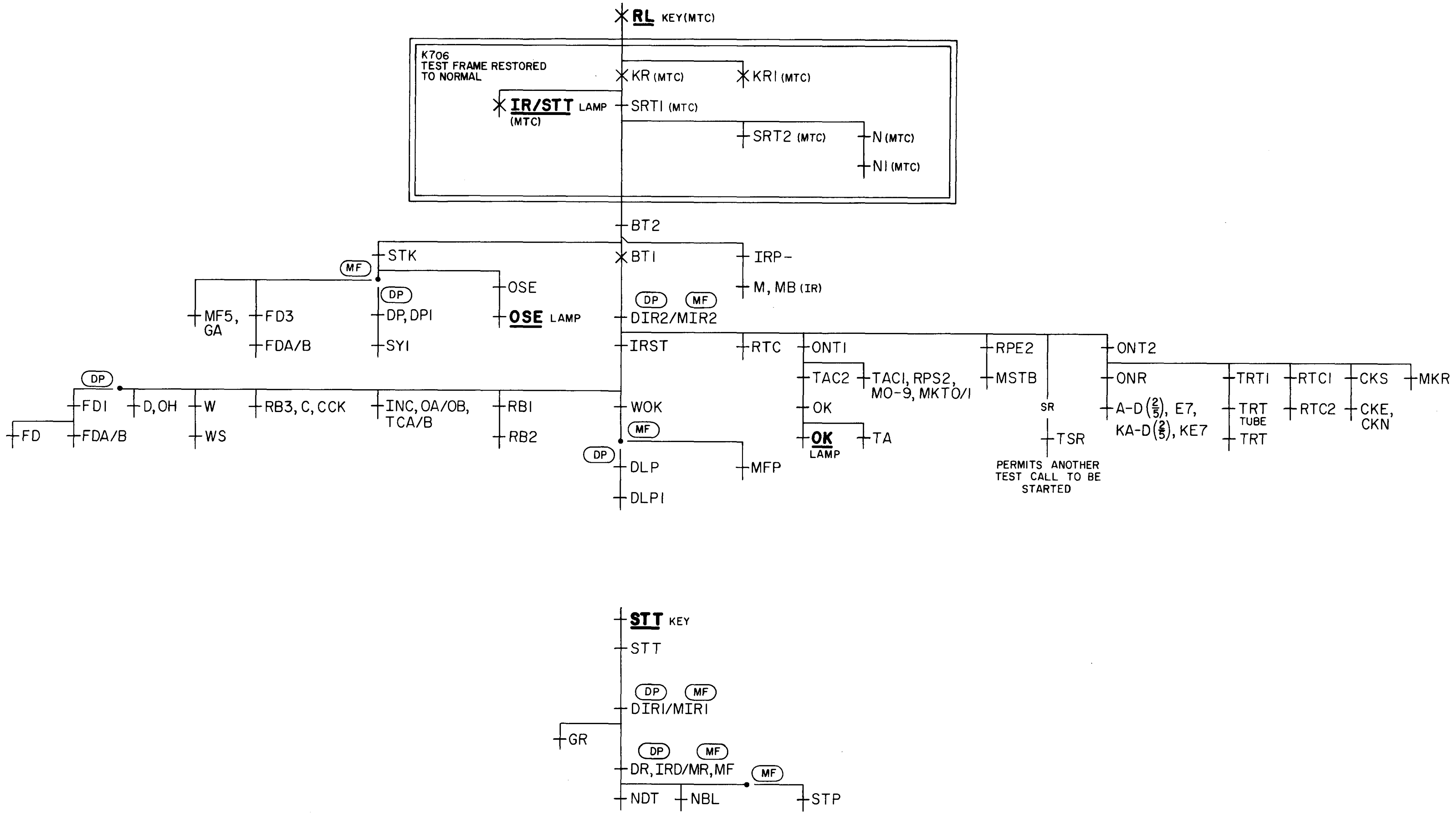
ISSUE
5

SFD-10-01-L306

SEQUENCE CHART
IR TEST - CHECKING AND
TEST COMPLETION

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED



ISSUE
5

SEQUENCE CHART
IR TEST RELEASE

SFD-10-01-L307

BELL TELEPHONE LABORATORIES
INCORPORATED

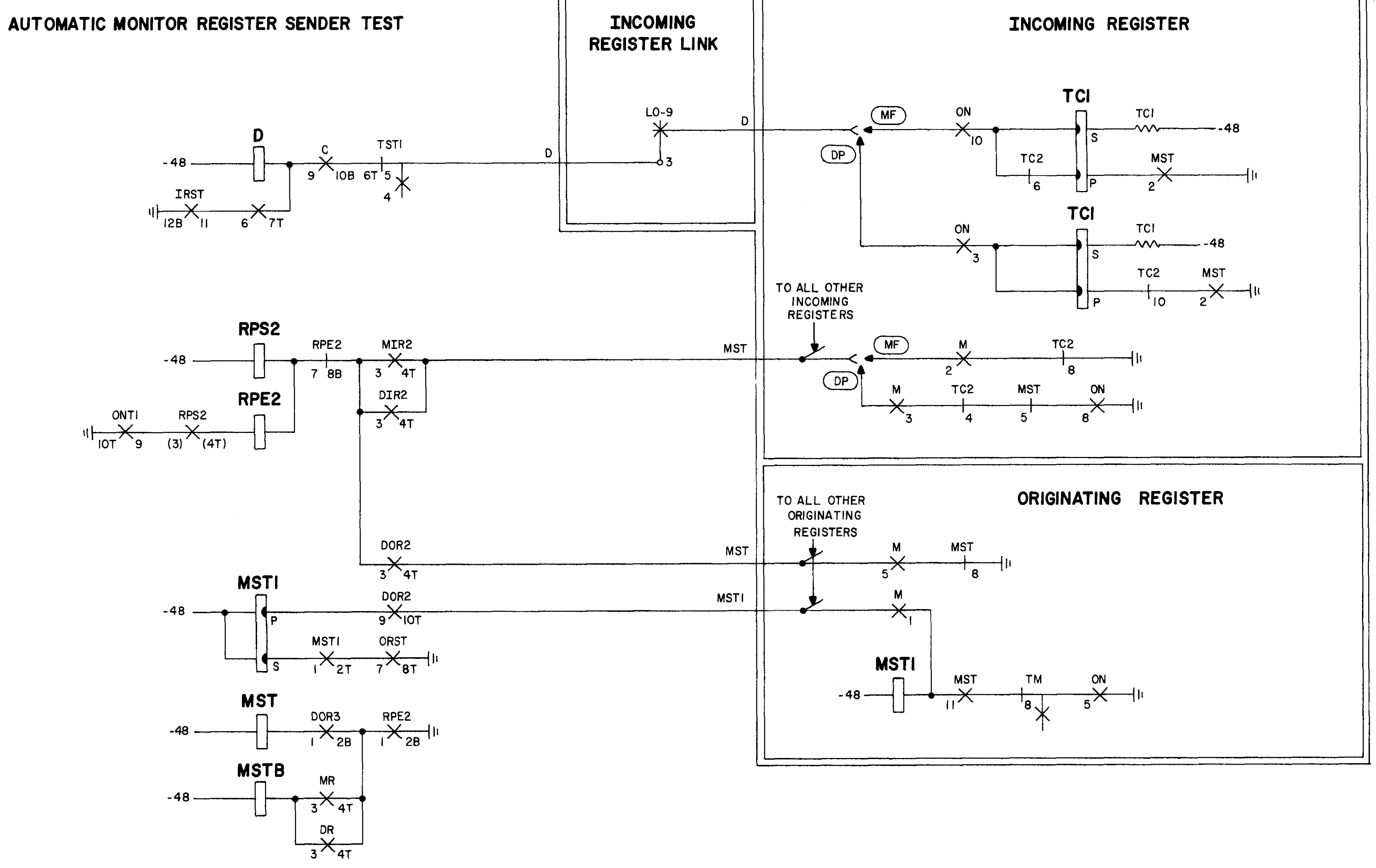
DWG SIZE 6S

PRINTED IN U.S.A.

E-7421-B (10-71)

BRUNING 44-131 24092

SFD-10-01-L307



ISSUE
5

SFD-10-01-L308

REGISTER TEST

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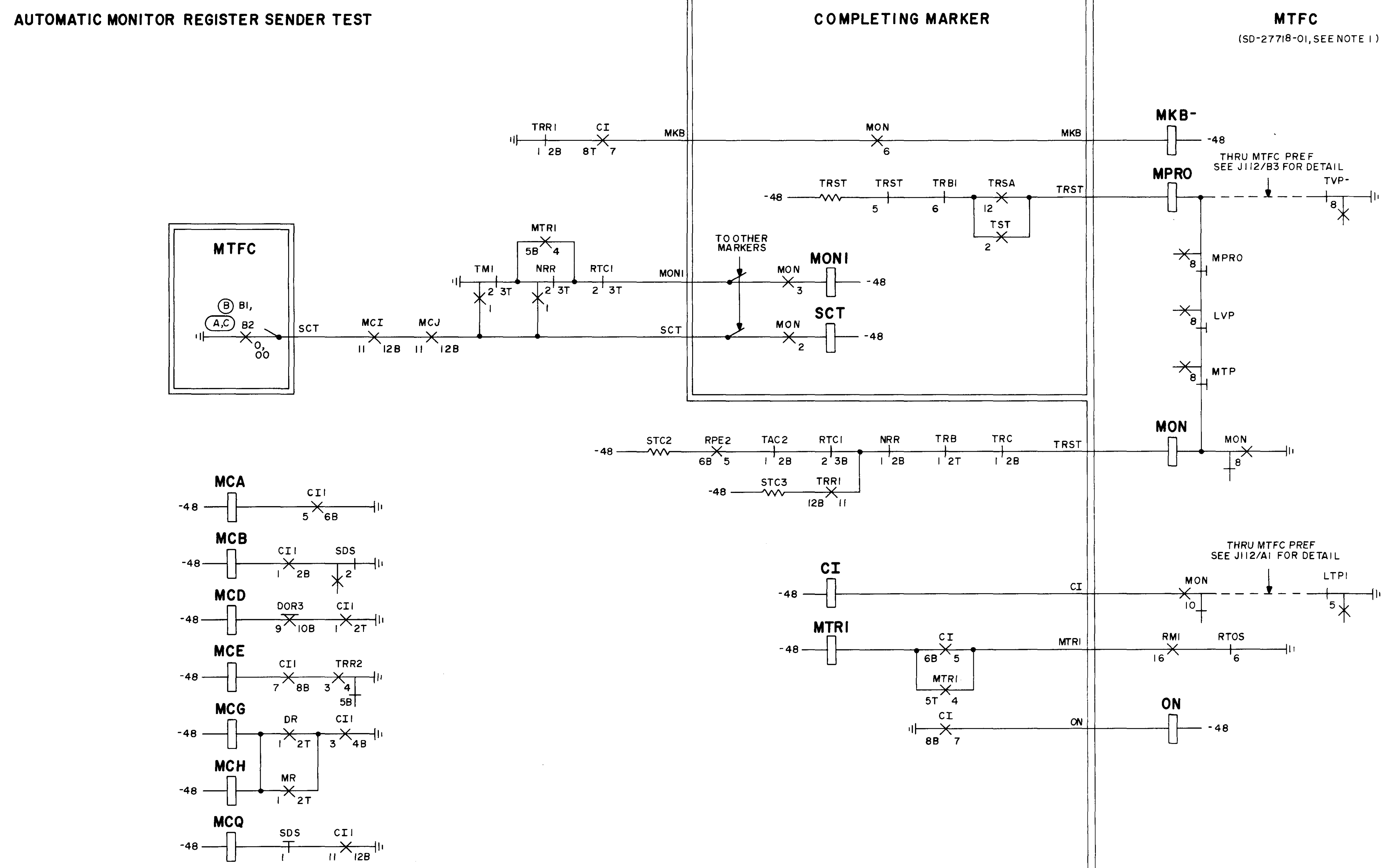
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-L308



SHEET NOTES:

1. FOR MTFC SD-25805-01 OPERATION, SEE PART J1
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

ISSUE 5

MTFC CONTROL

SFD-10-01-L309

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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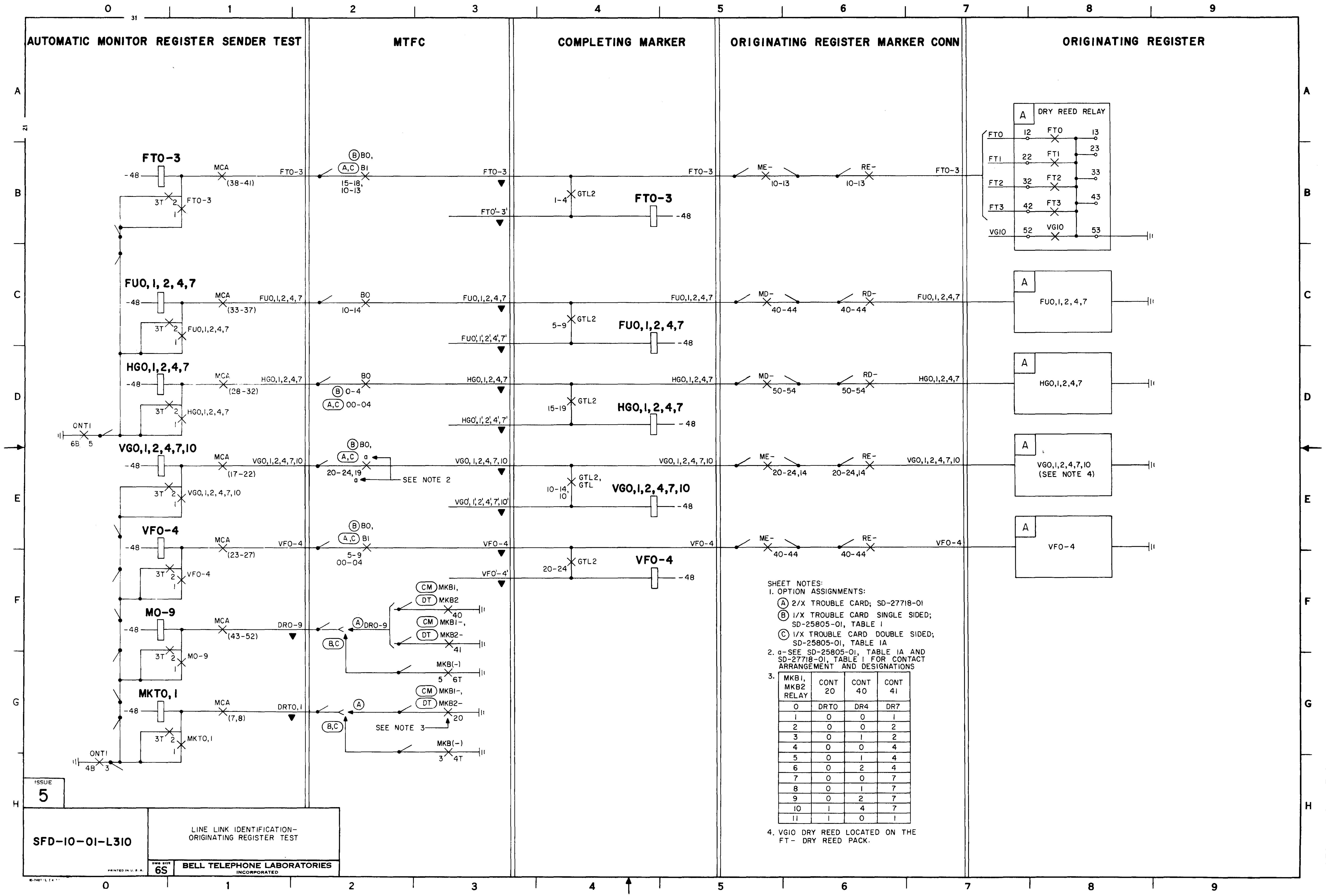
E-7421 (10-71)

SFD-10-01-L309



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A
2. a-SEE SD-25805-01, TABLE 1A AND SD-27718-01, TABLE 1 FOR CONTACT ARRANGEMENT AND DESIGNATIONS
3.

MKB1, MKB2 RELAY	CONT 20	CONT 40	CONT 41
0	DRTO	DR4	DR7
1	0	0	1
2	0	0	2
3	0	1	2
4	0	0	4
5	0	1	4
6	0	2	4
7	0	0	7
8	0	1	7
9	0	2	7
10	1	4	7
11	1	0	1

4. VG10 DRY REED LOCATED ON THE FT- DRY REED PACK.

ISSUE
5

SFD-10-01-L310

LINE LINK IDENTIFICATION-
ORIGINATING REGISTER TEST

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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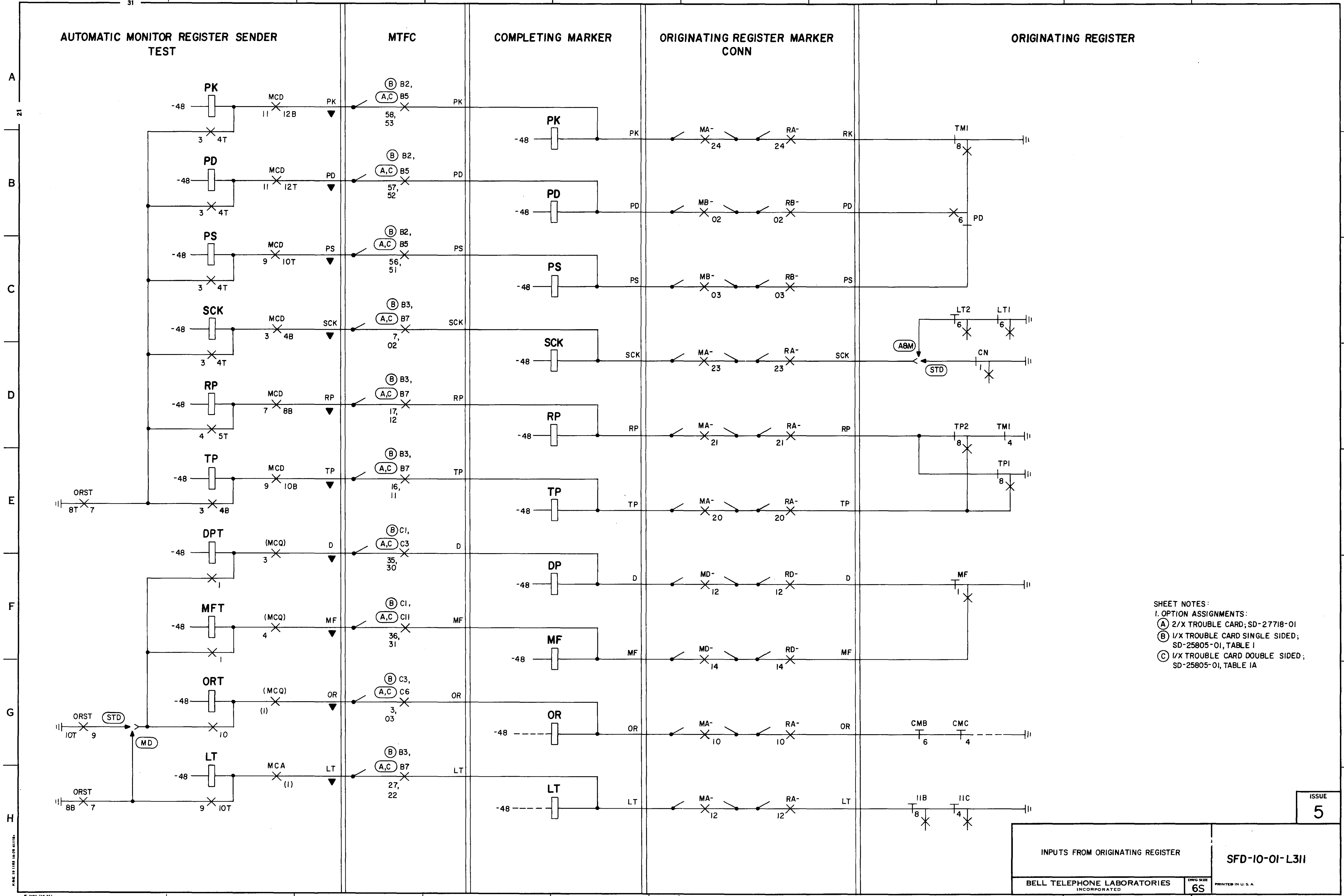
SFD-10-01-L310



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

INPUTS FROM ORIGINATING REGISTER

SFD-10-01-L311

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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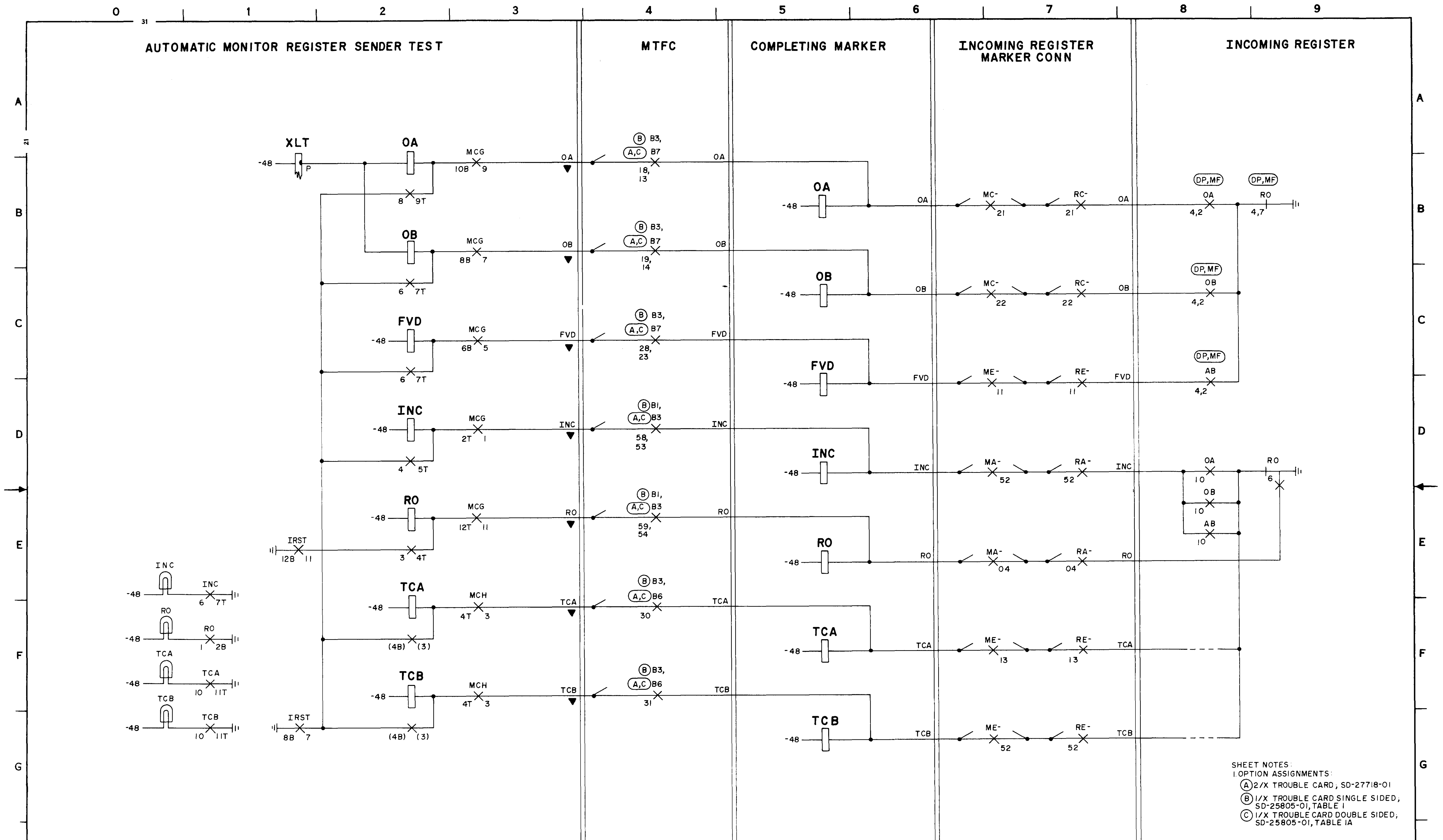
SFD-10-01-L311



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD, SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED, SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED, SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-L312

INPUTS FROM INCOMING REGISTER

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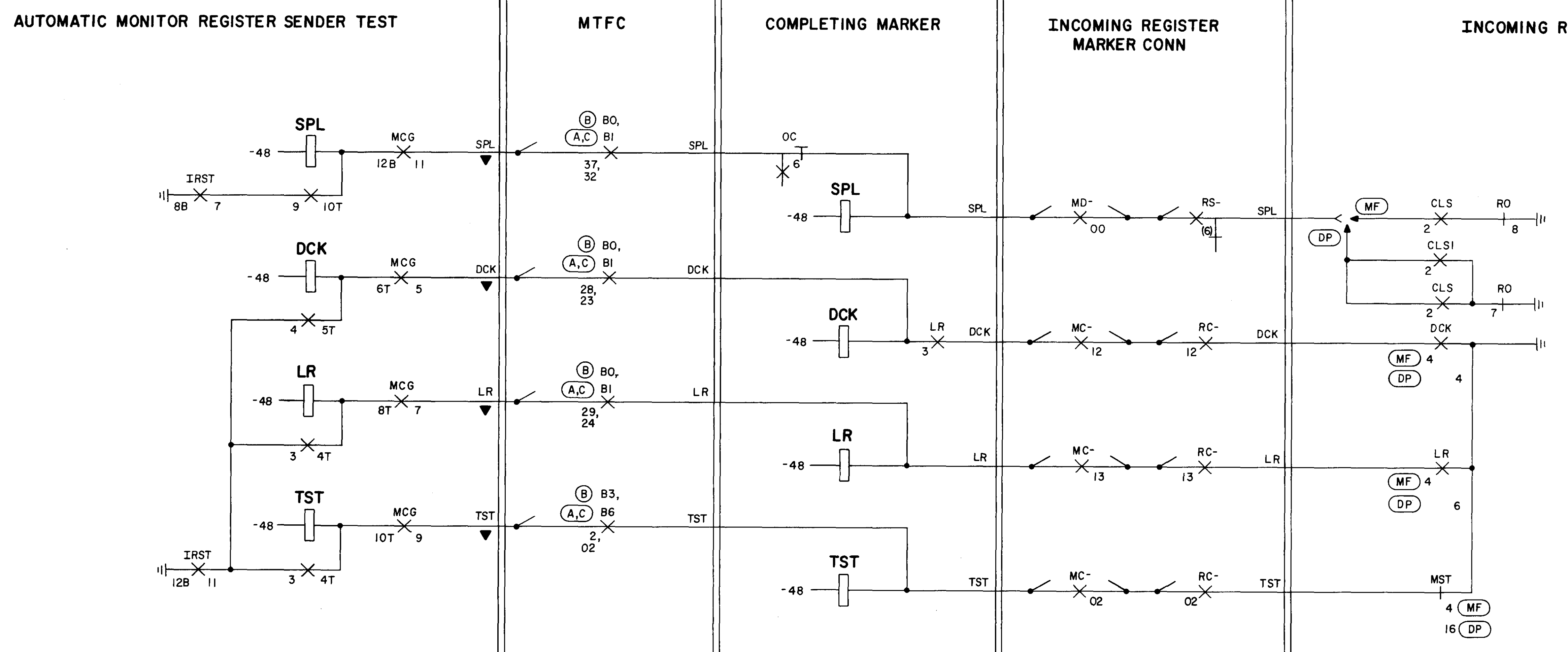
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-L312



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

INPUTS FROM INCOMING REGISTER

SFD-10-01-L313

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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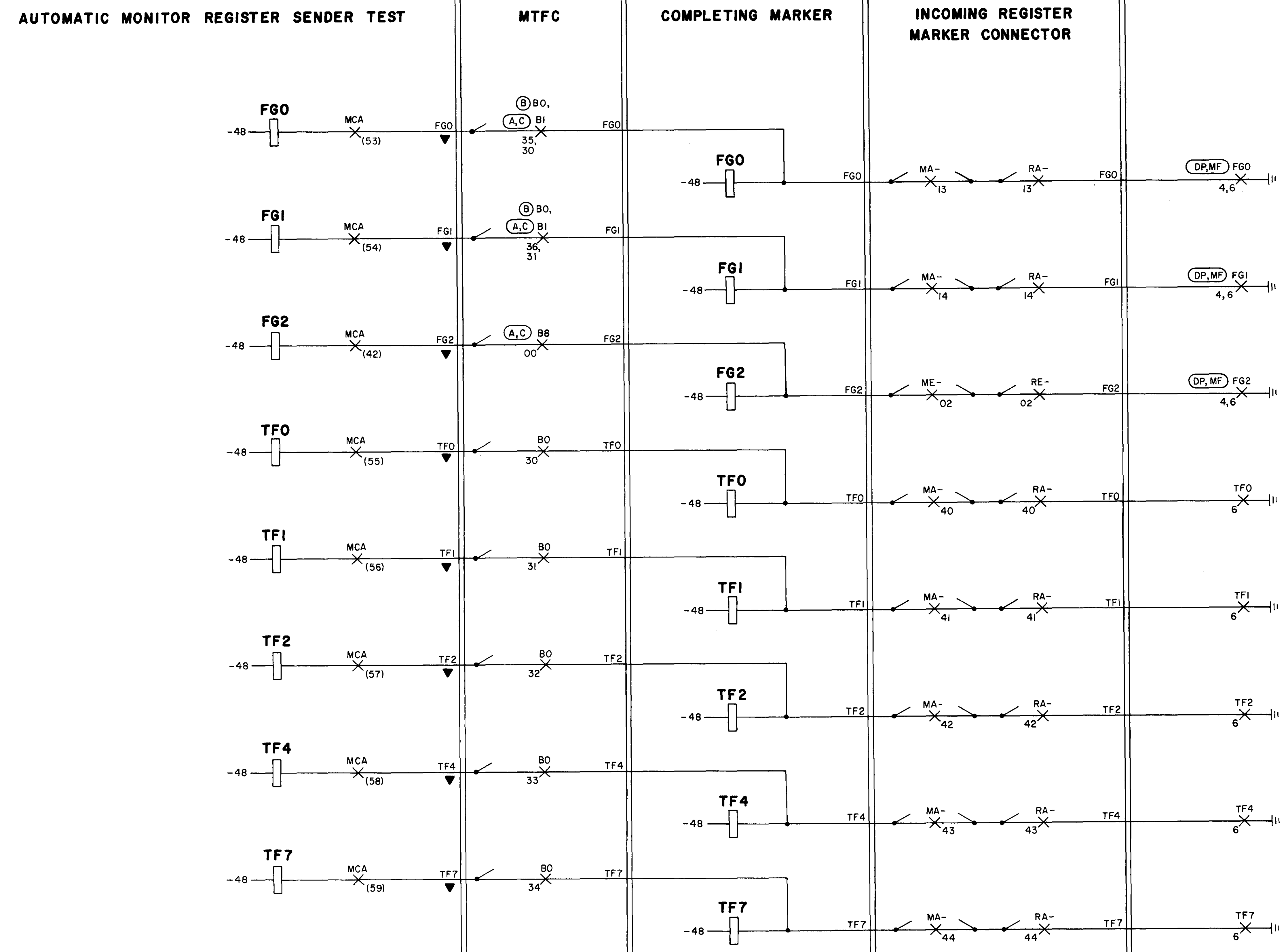
E-7421 (10-71)

SFD-10-01-L313



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-L314

TRUNK LINK FRAME IDENTIFICATION
INCOMING REGISTER TEST

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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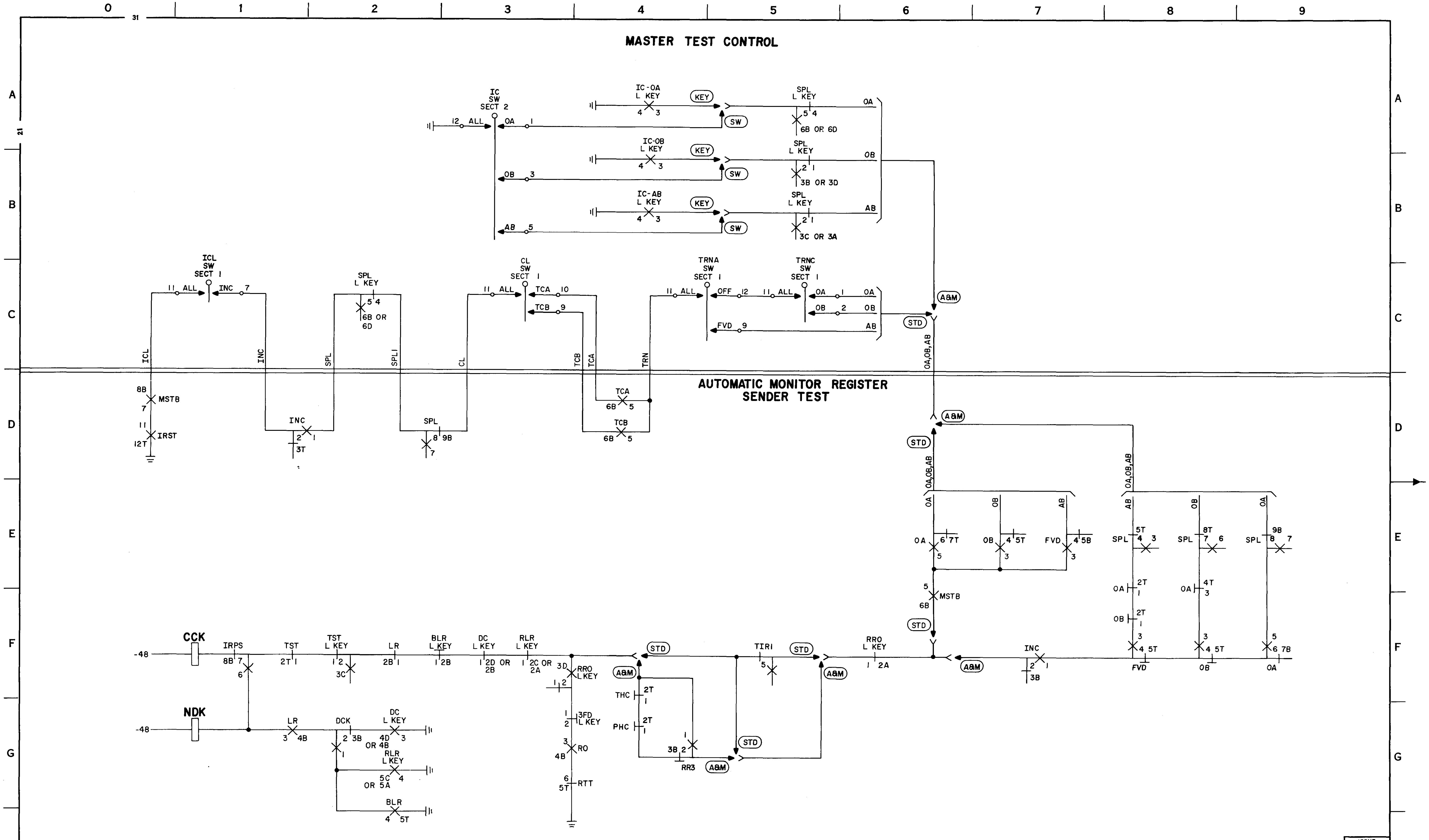
E-7481-L (4-71)

SFD-10-01-L314



ISSUE
5

IR TEST-CLASS CHECK

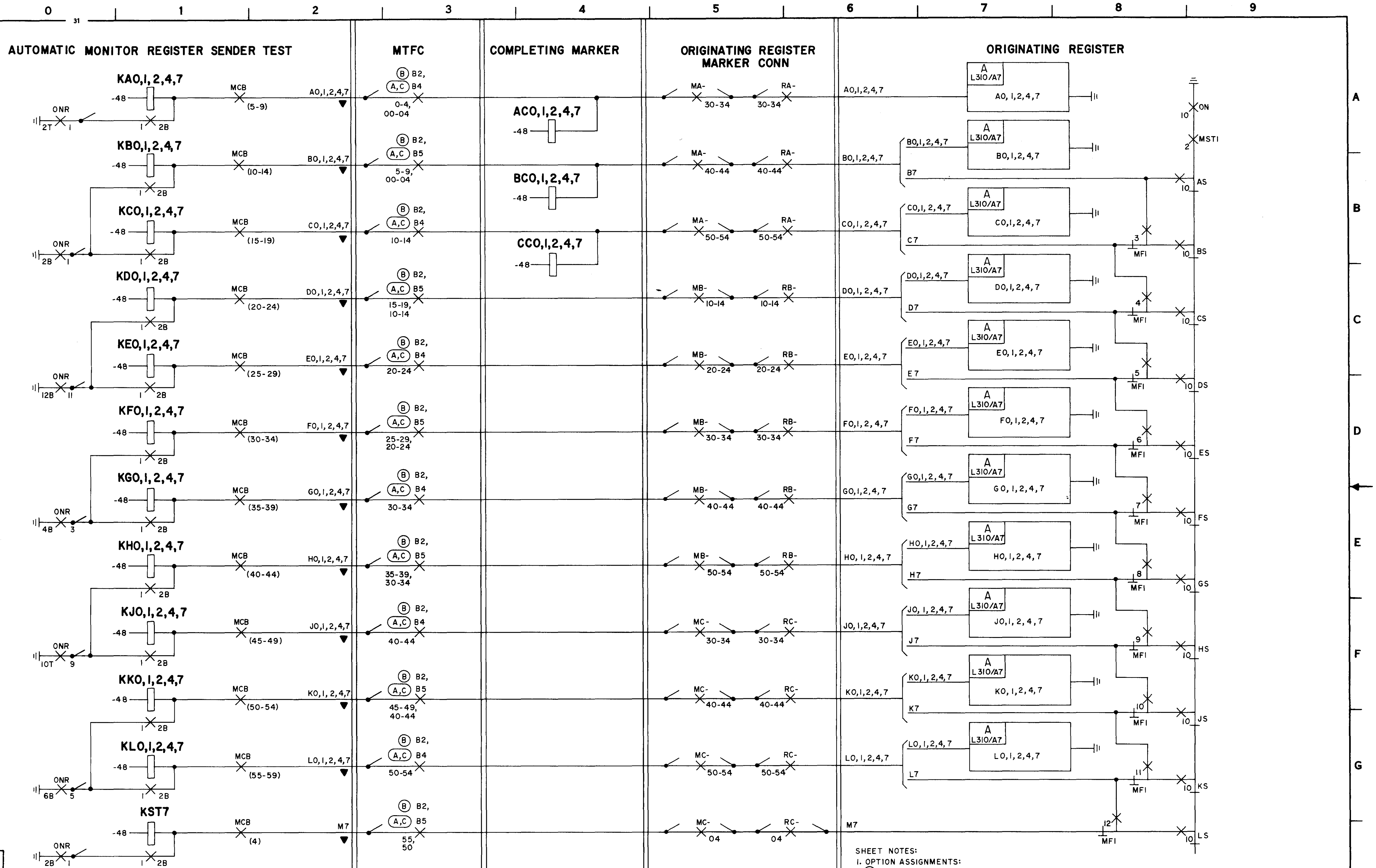
SFD-10-01-L315

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-L315



ISSUE
5

SFD-10-01-L316

DIGIT REGISTRATION-
OUTPUT OF ORIGINATING REGISTER

DWG SIZE 6S

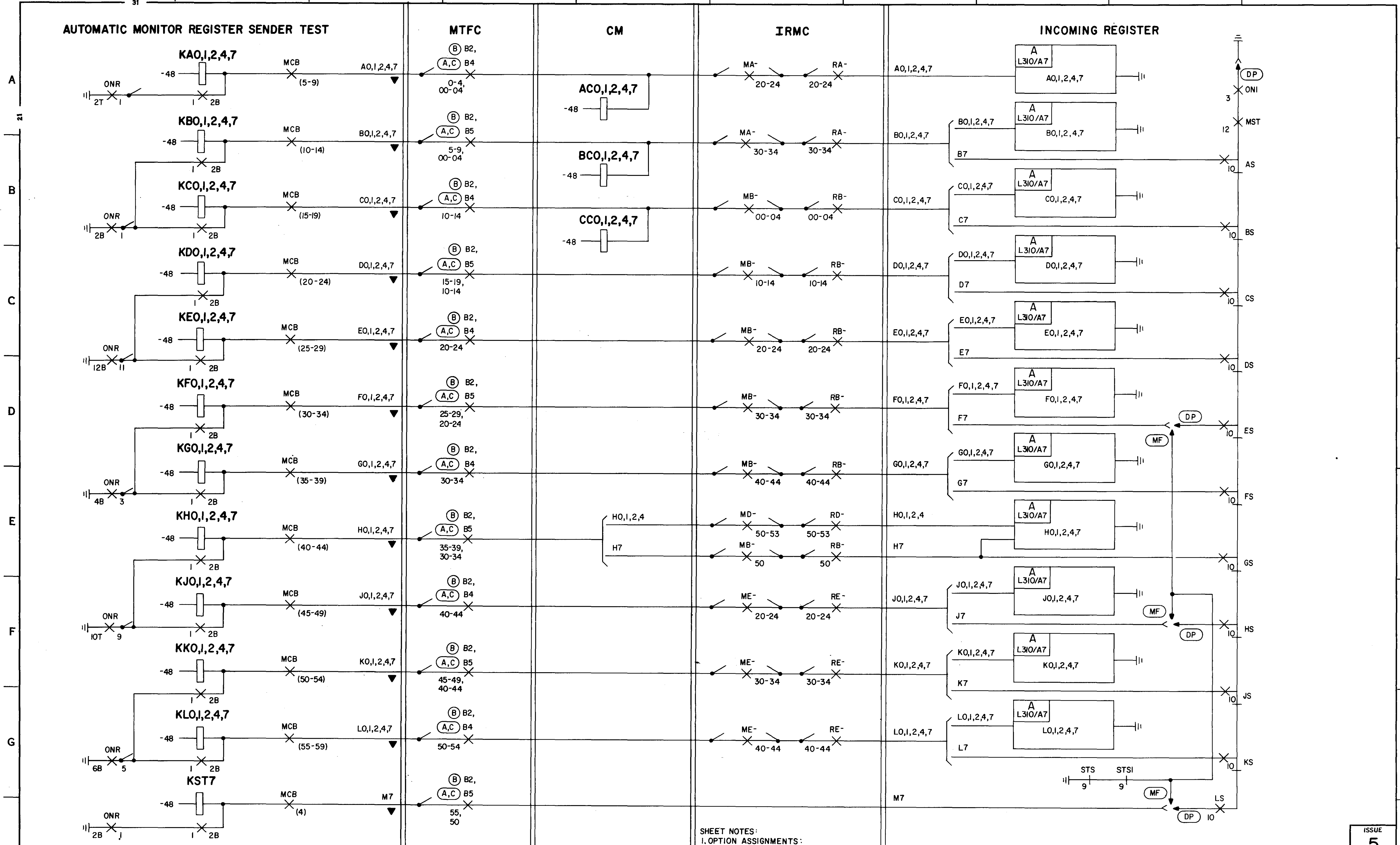
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7481-L (4-71)

SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

SFD-10-01-L316



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE I
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE IA

ISSUE
5

DIGIT REGISTRATION-
OUTPUT OF INCOMING REGISTER

SFD-10-01-L317

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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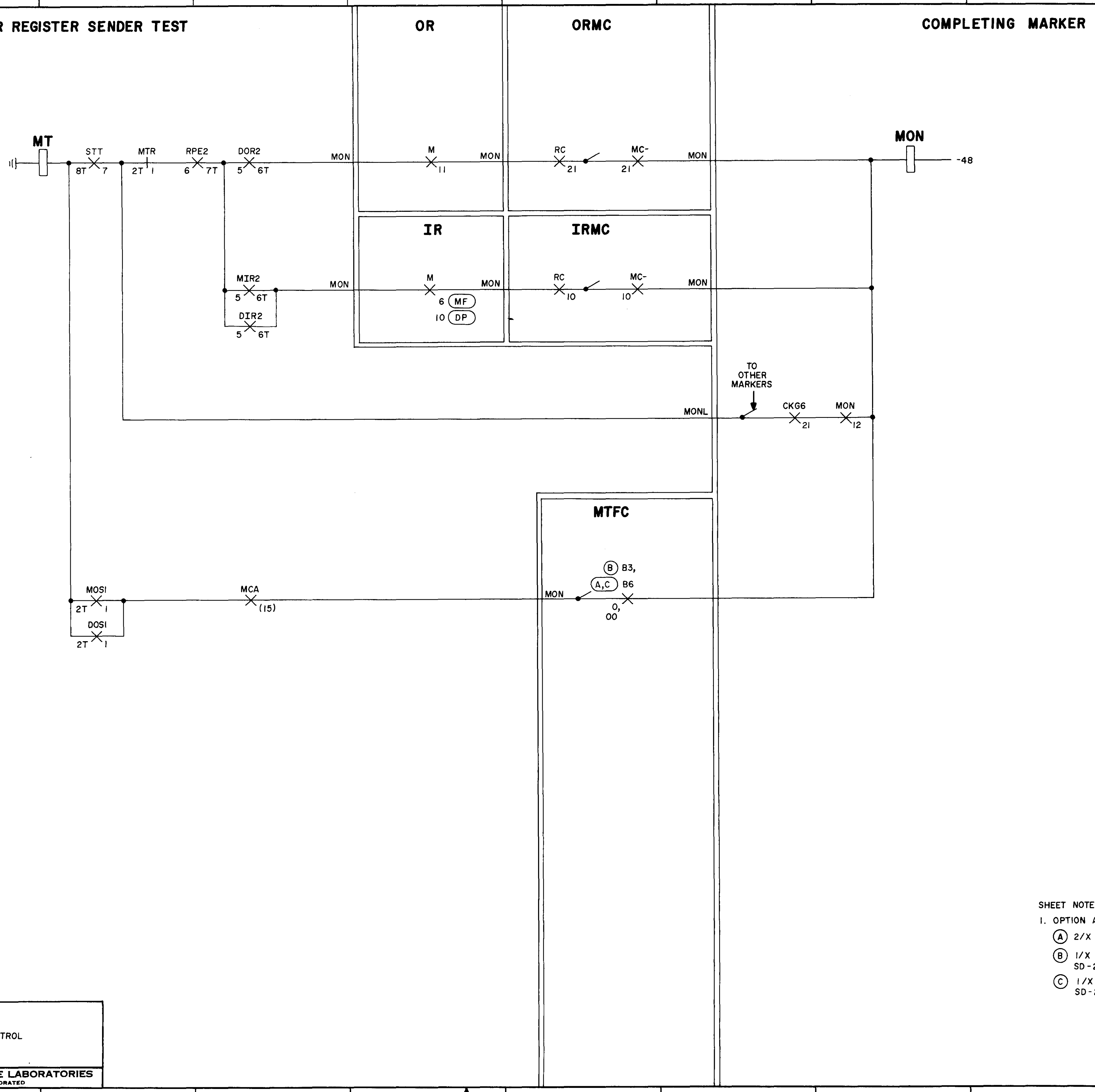
AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-L318

MARKER CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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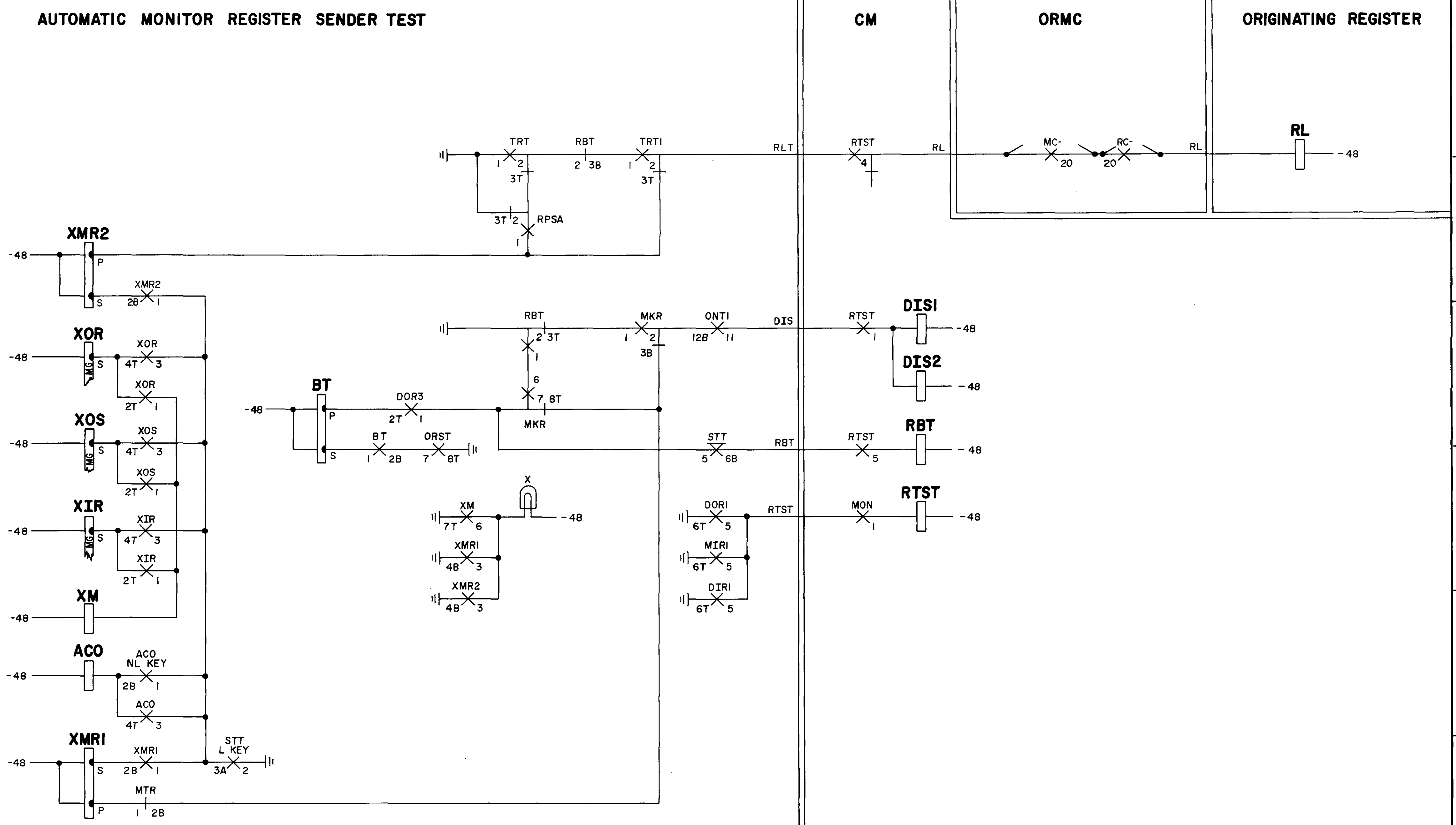

ISSUE
5

MARKER CONTROL

SFD-10-01-L319

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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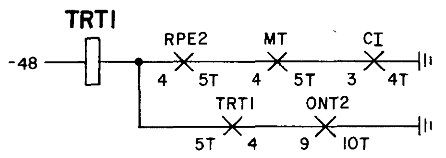
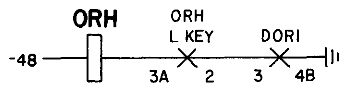
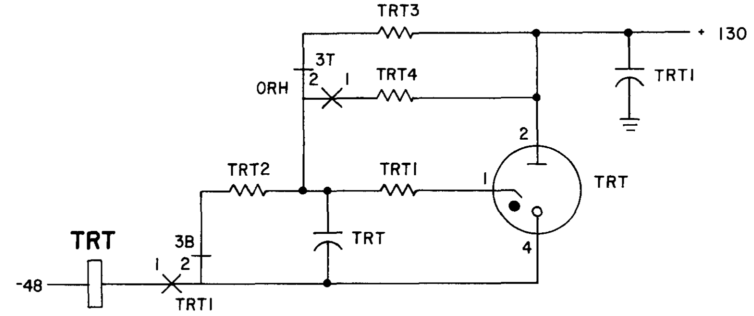
E-7421 (10-71)

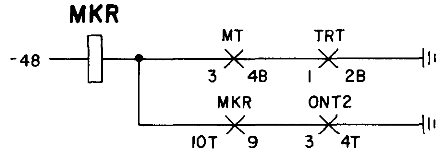
SFD-10-01-L319

AUTOMATIC MONITOR REGISTER SENDER TEST









ISSUE
5

SFD-10-01-L320

RELEASE TIMING

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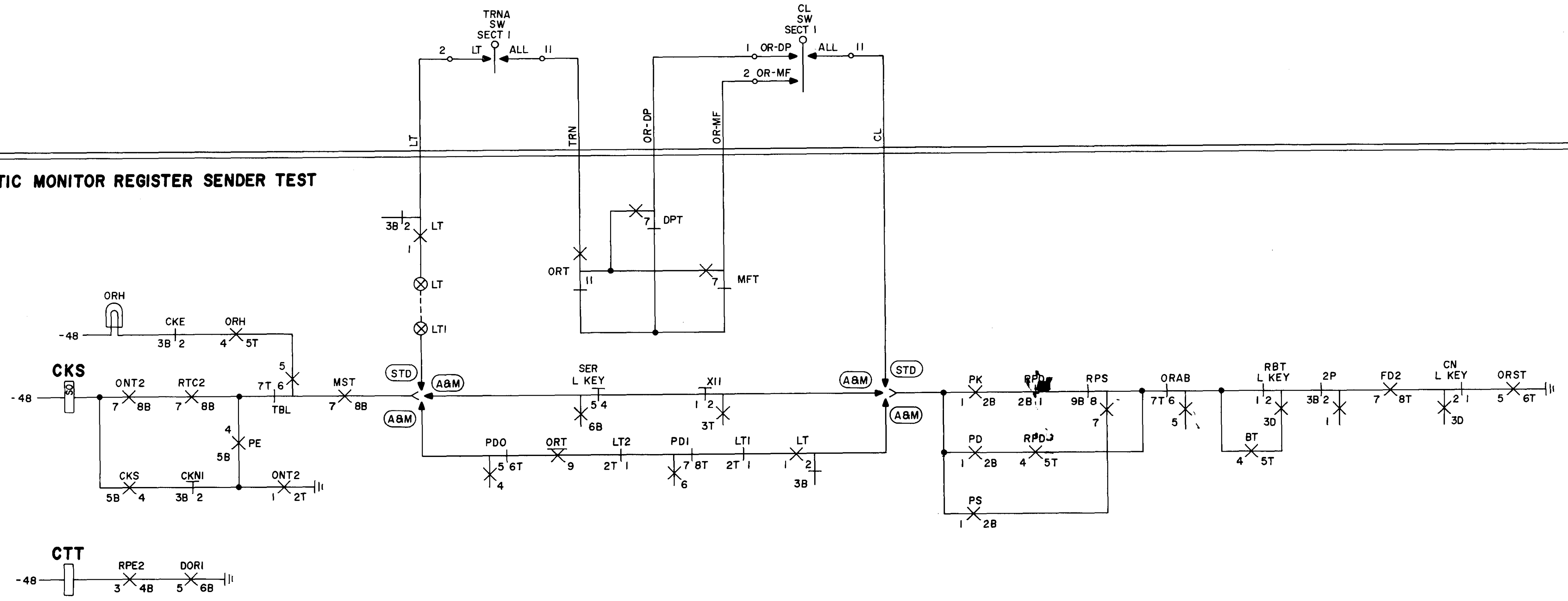
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-L320

MASTER TEST CONTROL

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L322

OR,SDR TEST-COMPLETION CHECK

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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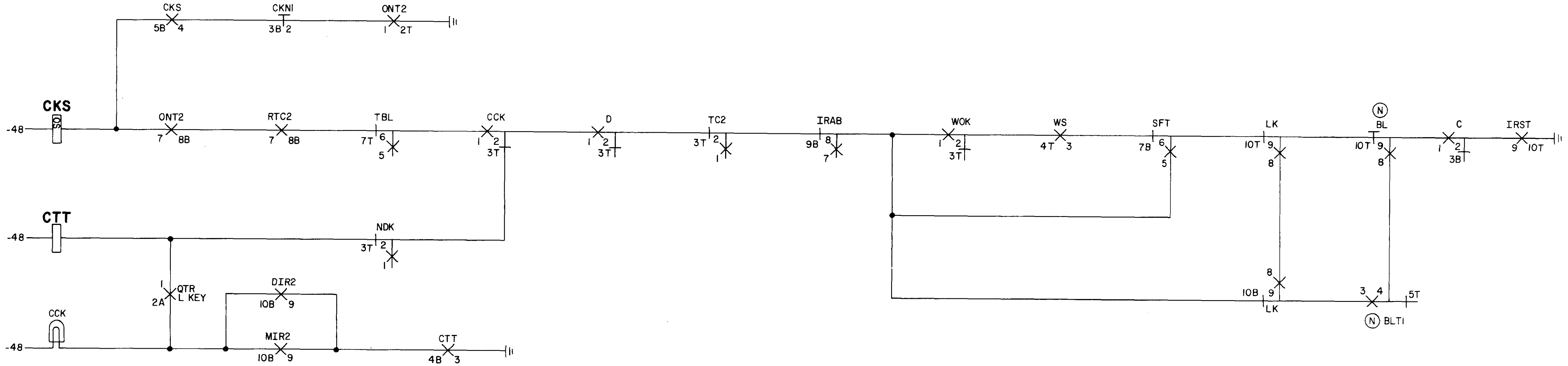
E-7481-L (4-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



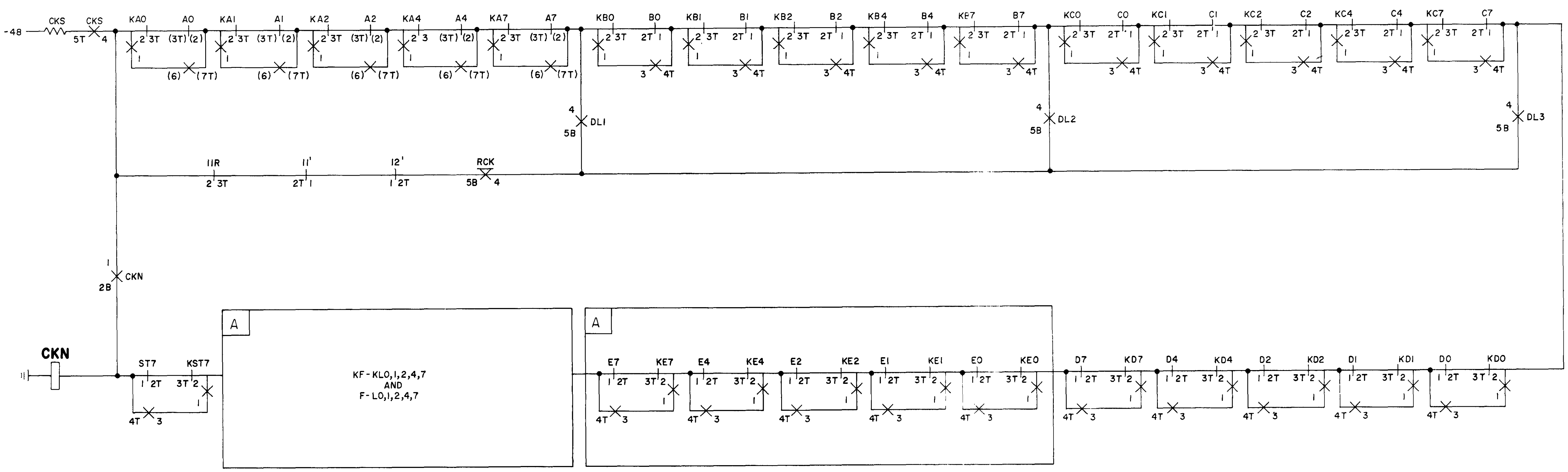
SHEET NOTES:
1. OPTION ASSIGNMENTS:
(N) BYLNK

IR TEST-COMPLETION CHECK

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES | SFD-10-01- | L323

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-L324

DIGIT REGISTRATION CHECK

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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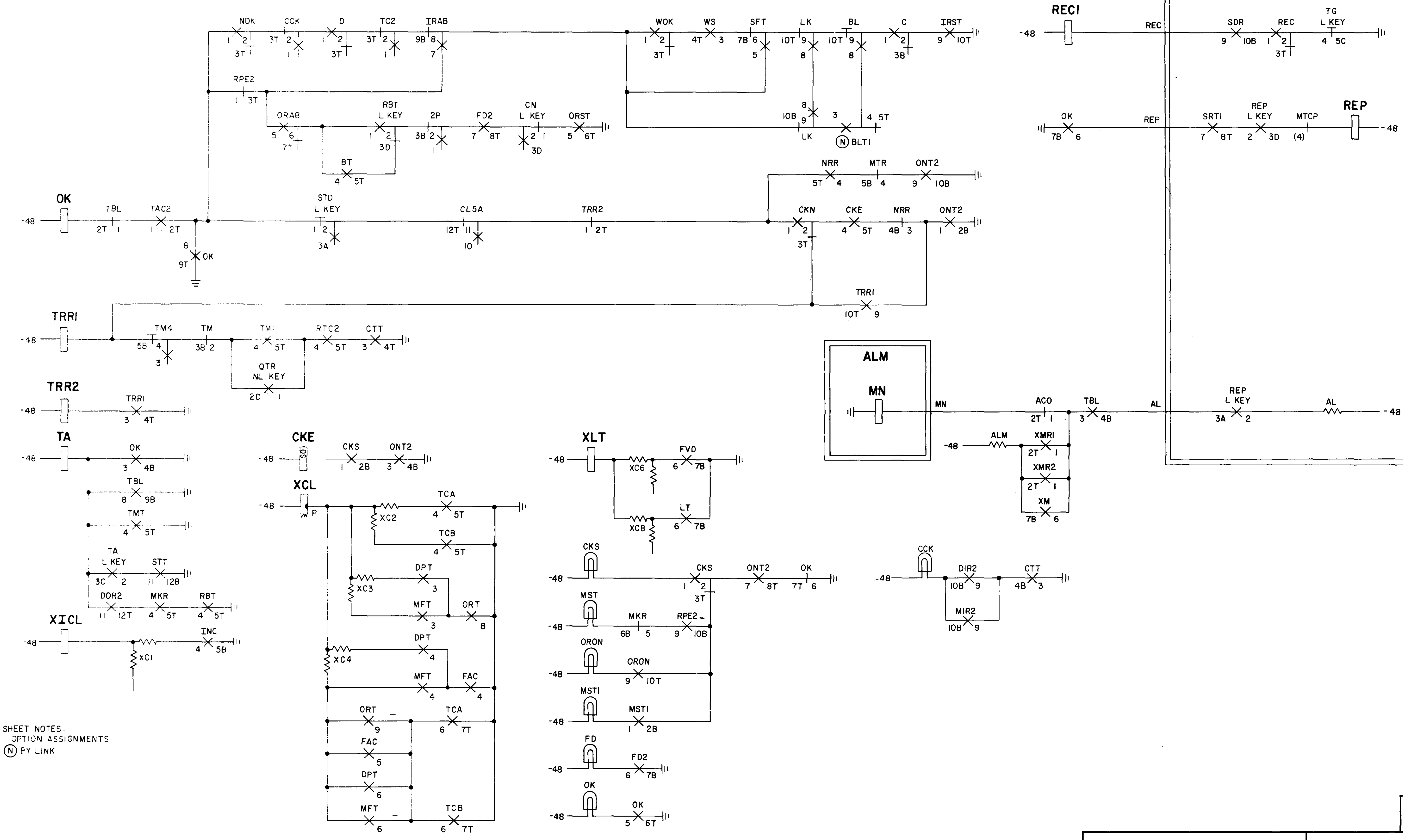
SFD-10-01-L324

AUTOMATIC MONITOR REGISTER SENDER TEST

MASTER TEST CONTROL



SHEET NOTES:
1. OPTION ASSIGNMENTS
Ⓝ BY LINK

TEST COMPLETION

SFD-10-01-L325

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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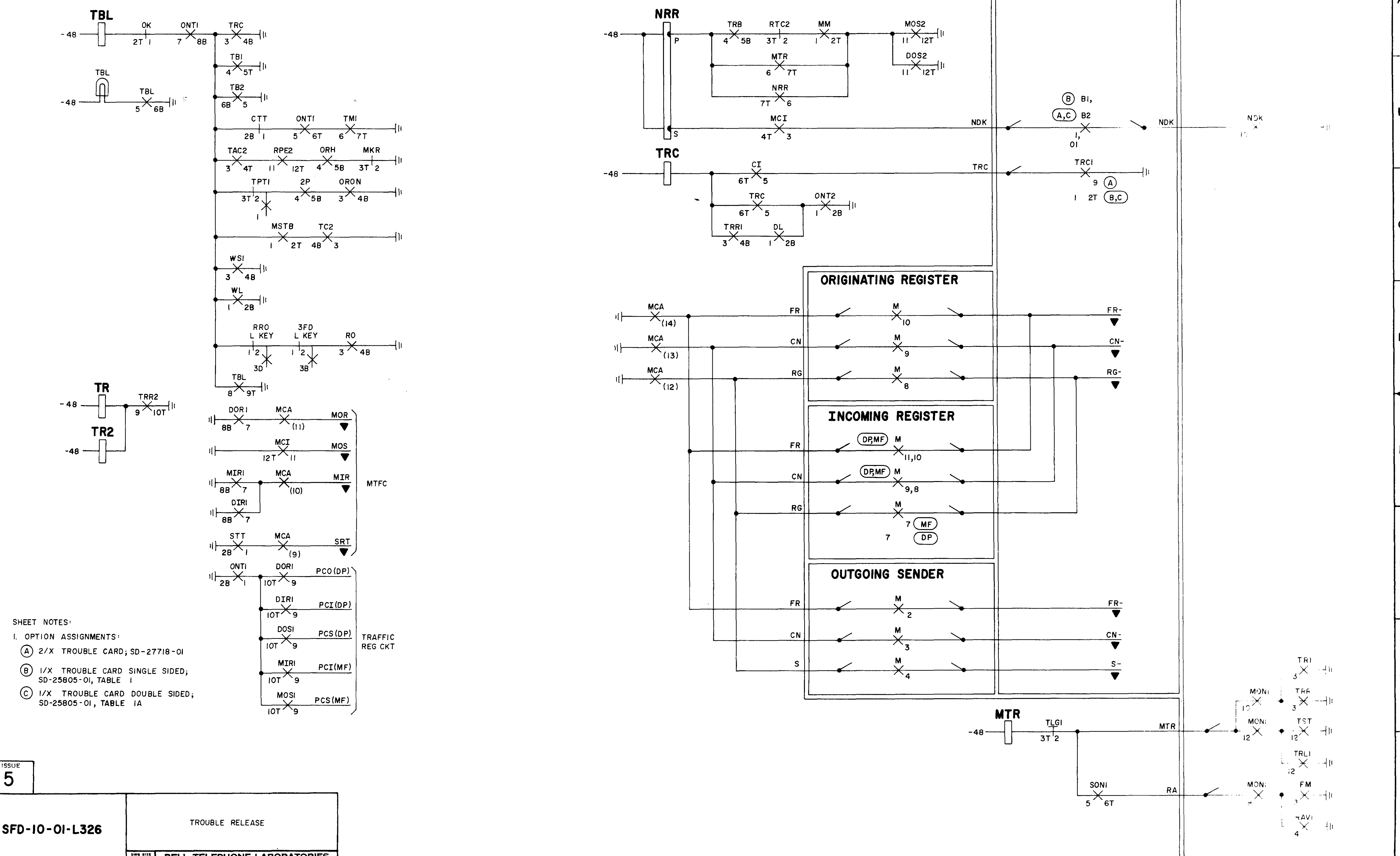
SFD-10-01-L325

AUTOMATIC MONITOR REGISTER SENDER TEST

MTFC

COMPLETING MARKER



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1

Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

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SFD-10-01-L326

TROUBLE RELEASE

DWG SIZE 6S

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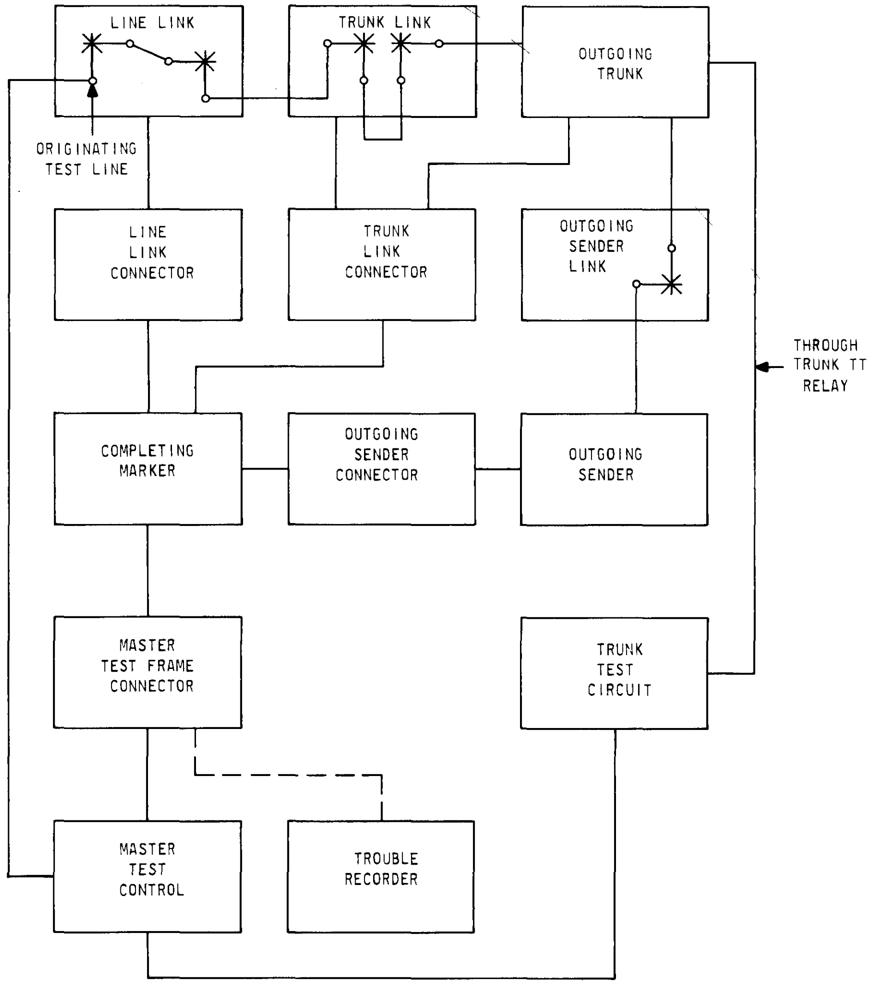
SFD-10-01-L326

OUTGOING CLASS OF TRUNK TEST (OGT)



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CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

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PART MO
OUTGOING CLASS OF
TRUNK TEST (OGT)

SFD-10-01-M001

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

OUTGOING TRUNK CIRCUITS
TESTS USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR.
1	SEIZURE	218-271-501	A
2	SUPERVISION-ORIGINATING END DISCONNECT	218-271-501	B
3	SUPERVISION-TERMINATING END DISCONNECT	218-271-501	C
4	OVERFLOW	218-271-501	I

BSP 218-271-501, ISS 8
SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-C802/C804/C806).
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG.OR OPT	KEY OR SWITCH	FUNCTION
1	68	OGT KEY	OUTGOING CLASS OF TRUNK TEST CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT AND THEN TO A MARKER THROUGH THE MASTER TEST FRAME CONNECTOR CIRCUIT IN ORDER TO DIRECT THE MARKER TO SET UP A TEST CONNECTION TO THE OUTGOING TRUNK UNDER TEST.
	74	TSTB SW (OGT)	
1,2	17,WX	FACD KEY (OPR/N-OPR)	ORIGINATING/FOREIGN AREA CLASS WITH THE FACD KEY NORMAL OR THE CL SWITCH OPERATED TO OR-DP/MF, INDICATES A HOME OFFICE CODE. WITH THE FACD KEY OR CL SWITCH OPERATED TO FAC-DP/MF, INDICATES A FOREIGN AREA CODE.
	11,NQ	CL SW (OR-DP/MF/ FAC-DP/MF)	
	WW	NONE	
1,2	11,OX	2DTO KEY	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME MARKER WITH NECESSARY ORIGINATING TRANSLATION FOR SELECTED ROUTE.
	17,NP	11/X11 KEY	
	17,SX	LT1 KEY	
	17,PH	LT2 KEY	
	11,EC	FVDO KEY	
	11,OY	LT3 KEY	
	NT,OW	LOC TRNSL (ALL KEYS NORMAL)	
	11,NQ	TRNA SW (LT/LT1/LT2/ LT3/2DT/ X11/11/FVD)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTT1 KEY	
1,2	4, KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH A THREE DIGIT AREA CODE OR THREE DIGIT OFFICE CODE.
	4,ZVL	A-C SW (0-9)	
1,2	4,KX	D(0-9) KEY	CALLED DIGITS (D-K) PRIMES THE MARKER WITH THE CALLED DIGITS.
	4,KY	E(0-9) KEY	
	4,KZ	F(0-9) KEY	
	4,JA	G(0-9) KEY	
	4,JB	H(0-9) KEY	
	4,JC	J(0-9) KEY	
	4,JD	K(0-9) KEY	
	4,ZVL	D-K SW (0-9)	
1,2	7,XA XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	

SD-25800-01

SEE NOTE	FIG.OR OPT	KEY OR SWITCH	FUNCTION
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37, GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED.
1,2	7,ED	CSGA/ CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICIATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED.
1	4	KY KEY	CONNECT NUMBER ALLOWS ANY NUMBER ON KEYS OR SWITCHES A(0-9) THRU L(0-9) TO BE TRANSMITTED TO THE MARKER.
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT. TLK KEY LOC ON TRUNK TEST PANEL.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
2	9	FS/ NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEY OR SWITCH, WITH (FS KEY) OR WITHOUT (NTFS KEY), FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS(0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
	79	FG (0-2) KEY	
	80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
2	U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) ON FG(0-2) KEYS LOOK BUSY.
	80	FS SW (0-9)	
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0-19) KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED, WILL OPERATE THE TST RELAY IN THE TLF WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME.
2	9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-9) KEY LOOK BUSY TO THE MARKER.
	9,JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS (TS0-19) KEY.
		TST1 KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.
2	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED. DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER.
2	8, 35	SGA/ SGB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.

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SFD-10-01-M002

TEST FRAME SET UP
OUTGOING CLASS OF TRUNK TEST

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DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-71)

SD-25800-01

* SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
2	8, 83	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP.
	84	OS SW (0-4)	
2	9,QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9,QF	RA SW (0-5)	
	9,IB	RA SW (0-11)	
	9,CG	RAU SW (0-9)	
	9/99, DL	RATI KEY	
2	9	GPA/ GPB KEY	ALLOTTER GROUP A AND B USED ON TEST REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
3	1	REC KEY	RECORD CAUSES MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING.
3	129, ZQY, ZQO	OBS KEY	OBSERVED GROUNDS THE OBST LEAD INSTEAD OF NOBT TO SIMULATE AN ORIGINATING REGISTER ON AN OBSERVED CALL.
3	17,US, VM	TOBS KEY	TRUNK OBSERVING PROVIDES PATH FOR OPERATING TOBS RELAY IN MARKER.
3	4	TTL KEY	TERMINATING TEST LINE OPERATED ON TRUNK TEST TO CAUSE AN INCOMING TRUNK TEST LINE NUMBER TO BE TRANSMITTED TO THE MARKER USED TO SET UP THE TEST CONNECTION.
3		ANS KEY	ANSWER WHEN OPERATED TO ANSWER EXTENDS THE TIP AND RING LEADS TOWARD A:TERMINATING TEST LINE CONSISTING OF RESISTORS AND RELAYS SIMULATING AN INCOMING TRUNK CIRCUIT. THE RESISTANCE IN THIS LOOP GIVES AN OPERATE TEST TO CALLED PARTY SUPERVISORY RELAY OF THE TRUNK CIRCUITS. ANS KEY LOC ON TTC PANEL
3	17	ROT	REORDER TEST SETS UP REORDER IN THE TRUNK BEING TESTED.

* SEE SHEET M002 FOR SHEET NOTES.

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TEST FRAME SET-UP
OUTGOING CLASS OF TRUNK TEST

SFD-10-01-M003

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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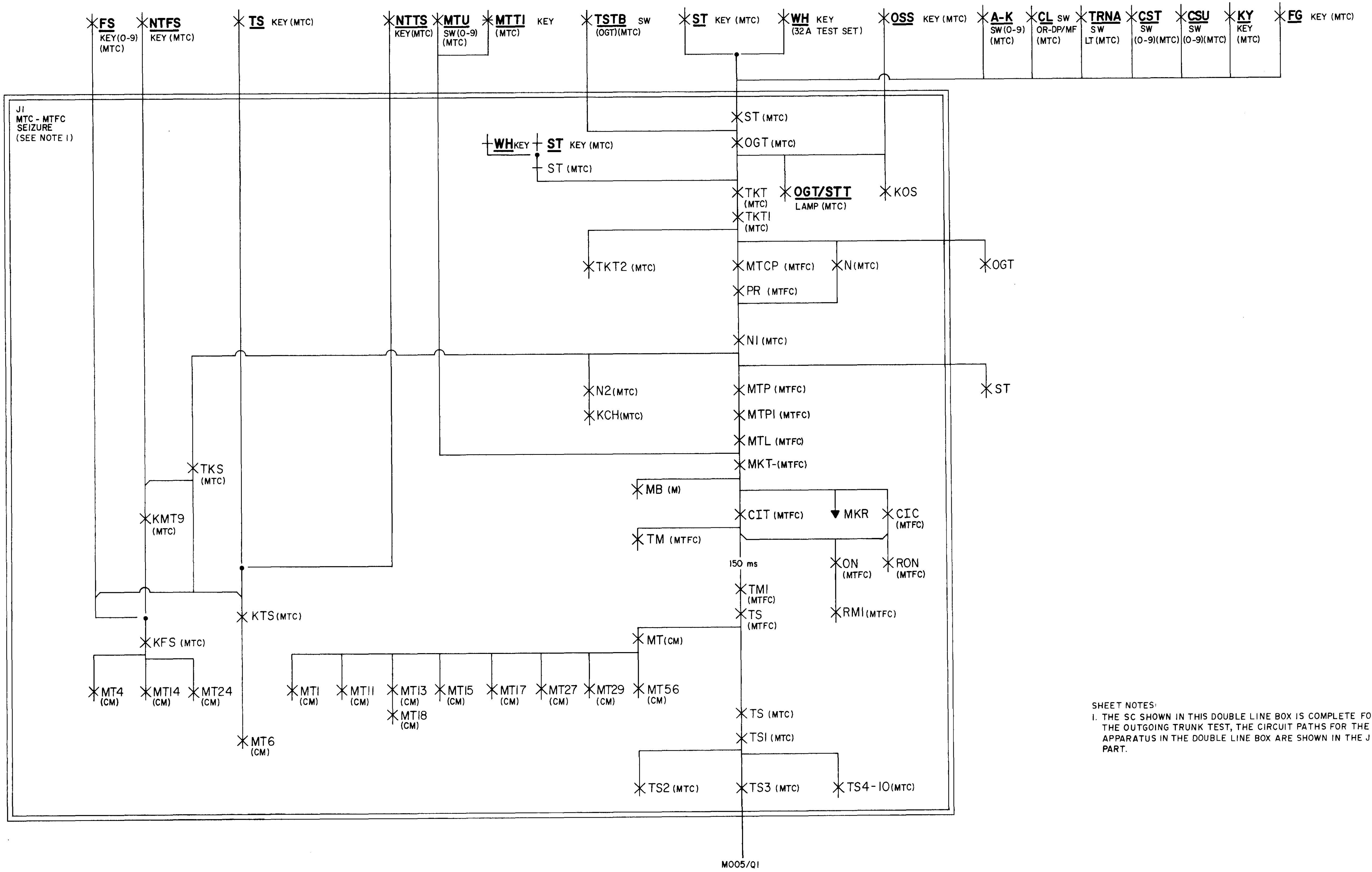
OUTGOING CLASS OF TRUNK TEST (OGT)



SHEET NOTES:

1. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE OUTGOING TRUNK TEST, THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE 5

SFD-10-01-M004

SEQUENCE CHART
OUTGOING CLASS OF
TRUNK TEST (OGT)

6S

BELL TELEPHONE LABORATORIES
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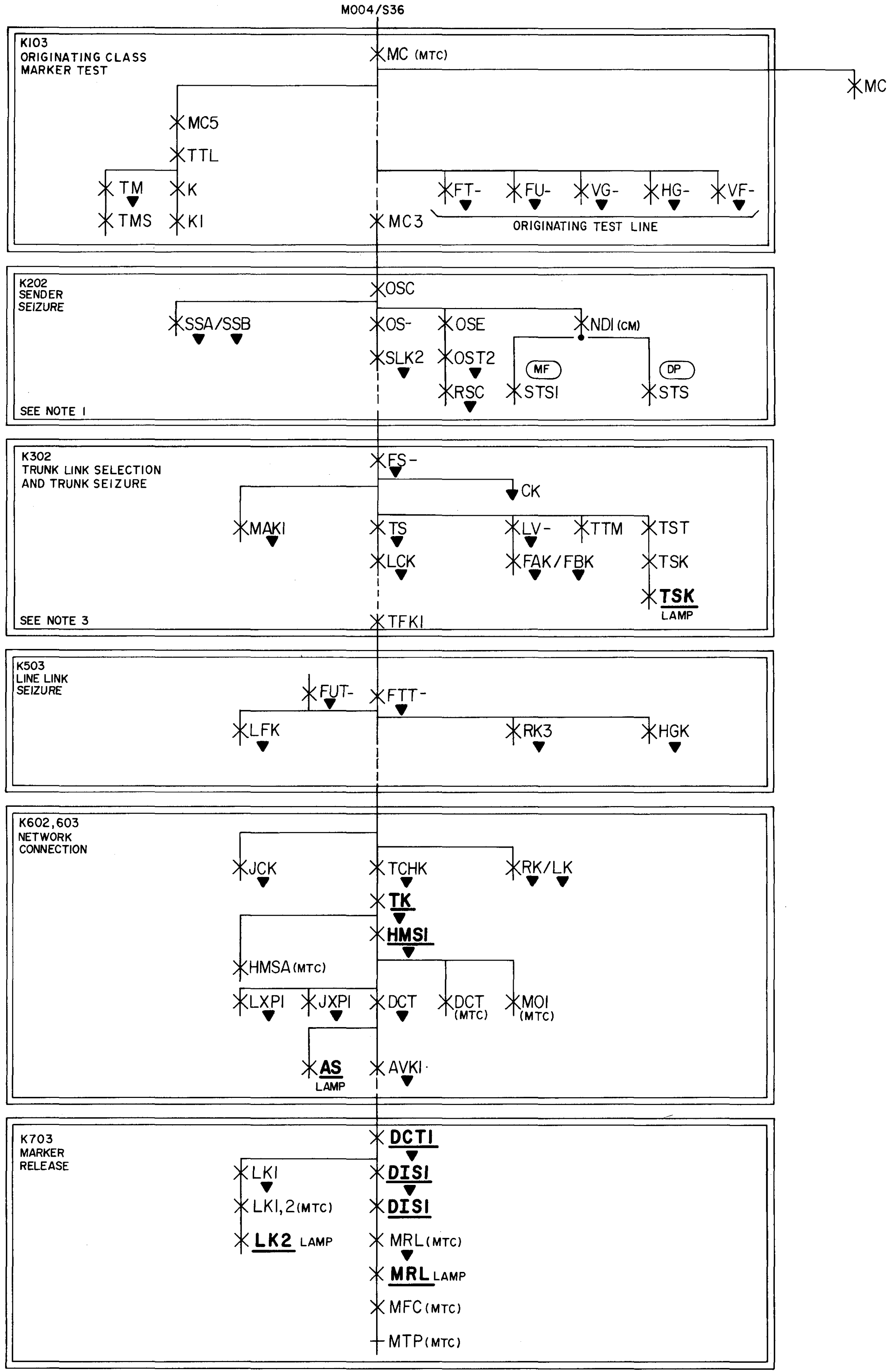
E-7481-L (4-73)

SFD-10-01-M004



SHEET NOTES:

1. A NO (DIGITS) SIGNAL IS GIVEN TO THE SENDER TO ALLOW IT TO RELEASE WITHOUT PULSING.
2. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD27718-01
3. (TST) RELAY OPERATES IN TRUNK LINK FRAME FROM OPERATED (NTTS) KEY, MTC

SEQUENCE CHART
OUTGOING CLASS OF
TRUNK TEST (OGT)

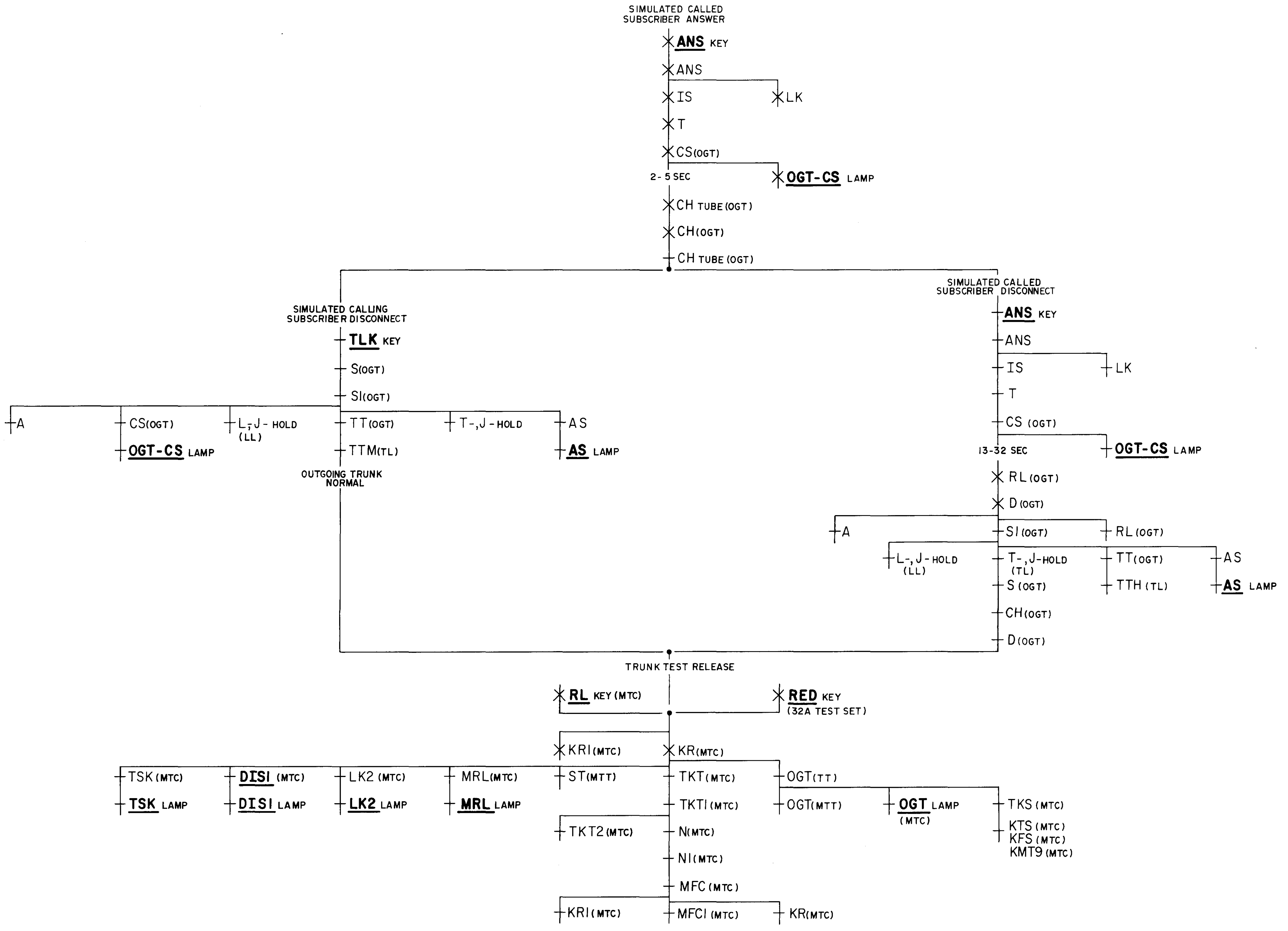
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M005

SFD-10-01-M005

BRUNING 44-131 28142

E-7421-8 (6-75) PRINTED IN U.S.A.



SEQUENCE CHART
OUTGOING CLASS OF TRUNK TEST
(OGT)

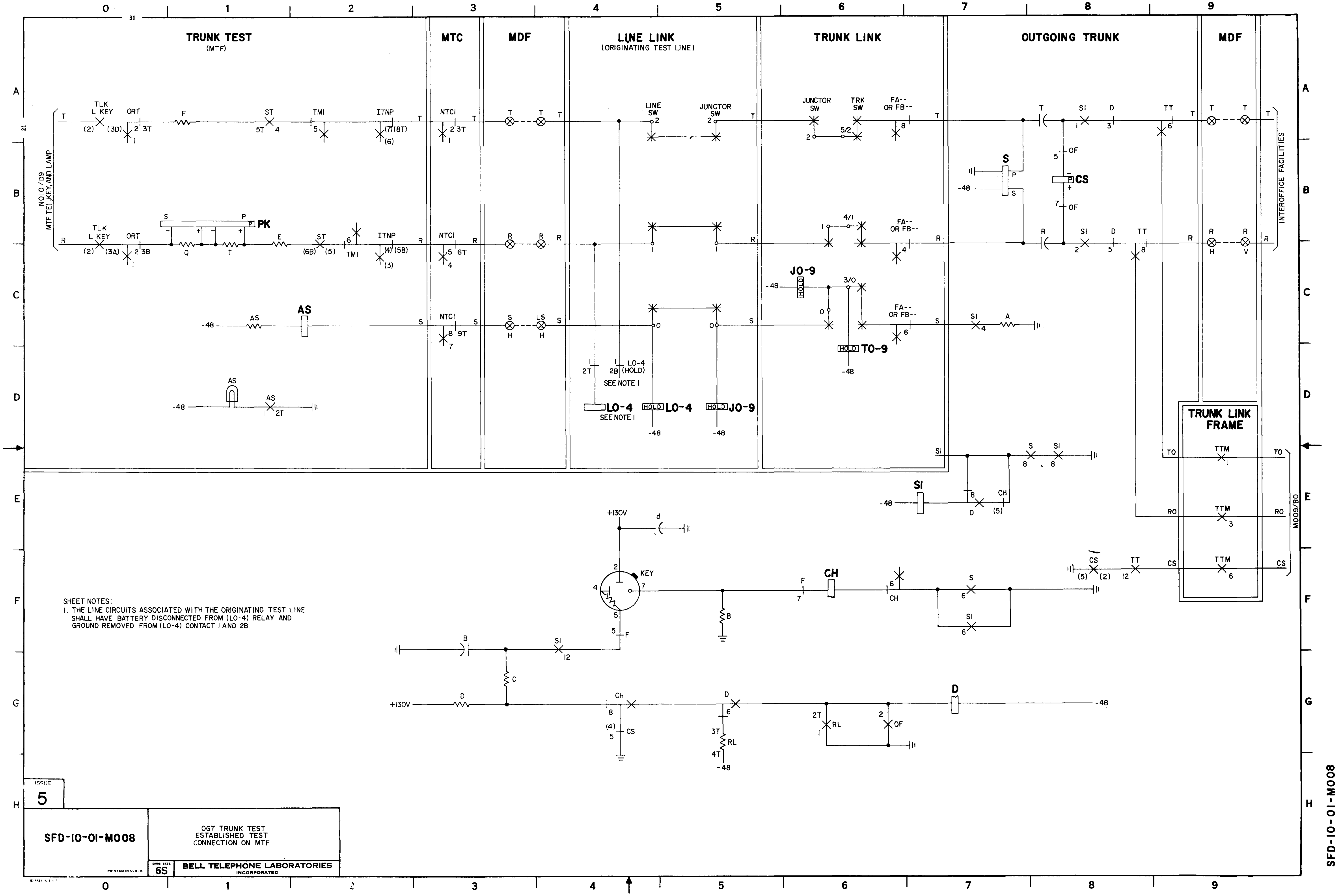
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M007

SFD-10-01-M007

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



SHEET NOTES:
1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING TEST LINE SHALL HAVE BATTERY DISCONNECTED FROM (LO-4) RELAY AND GROUND REMOVED FROM (LO-4) CONTACT 1 AND 2B.

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SFD-10-01-M008

OGT TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

DWG SIZE 6S

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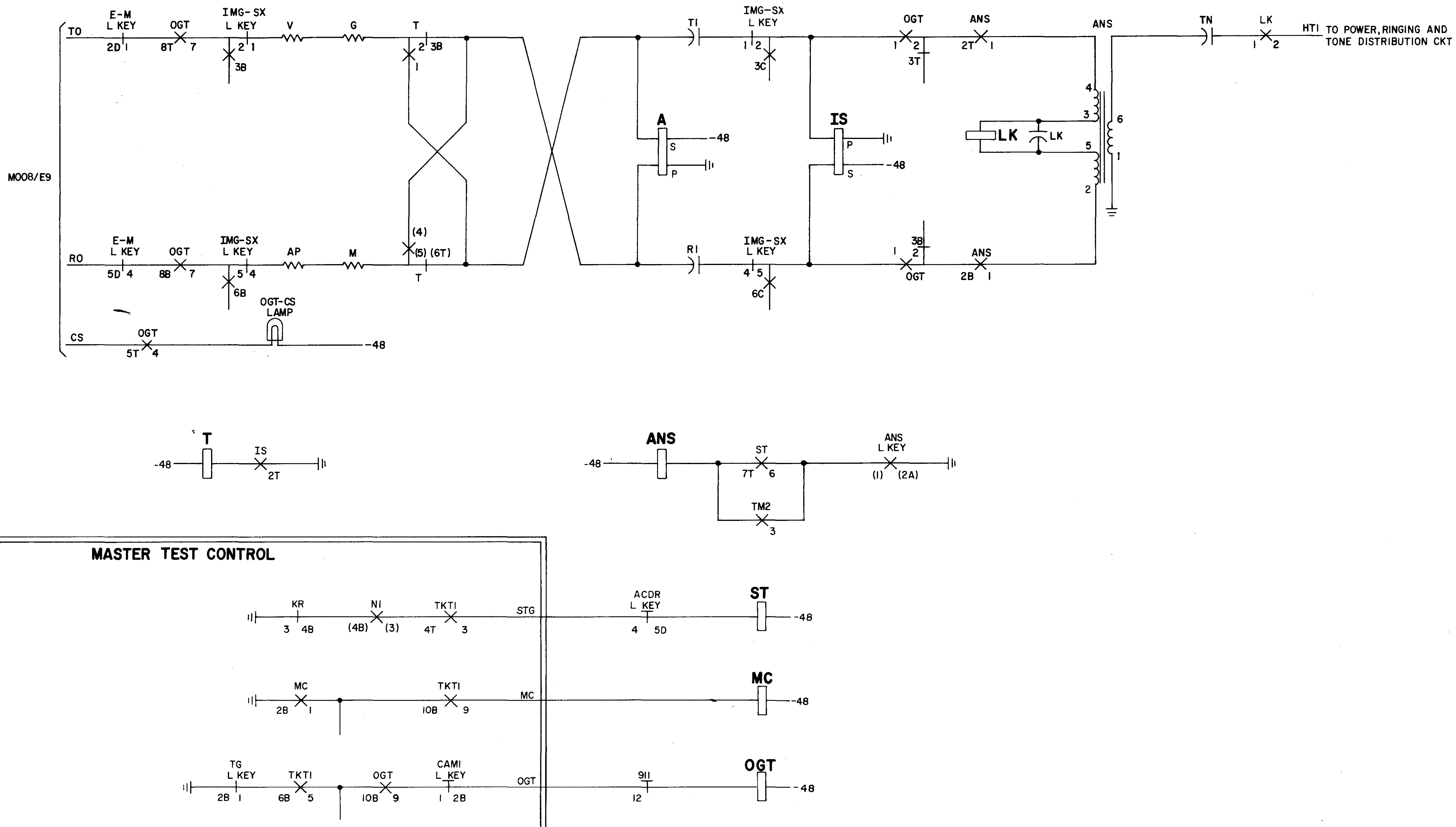
SFD-10-01-M008

TRUNK TEST (MTF)

MASTER TEST CONTROL



OGT TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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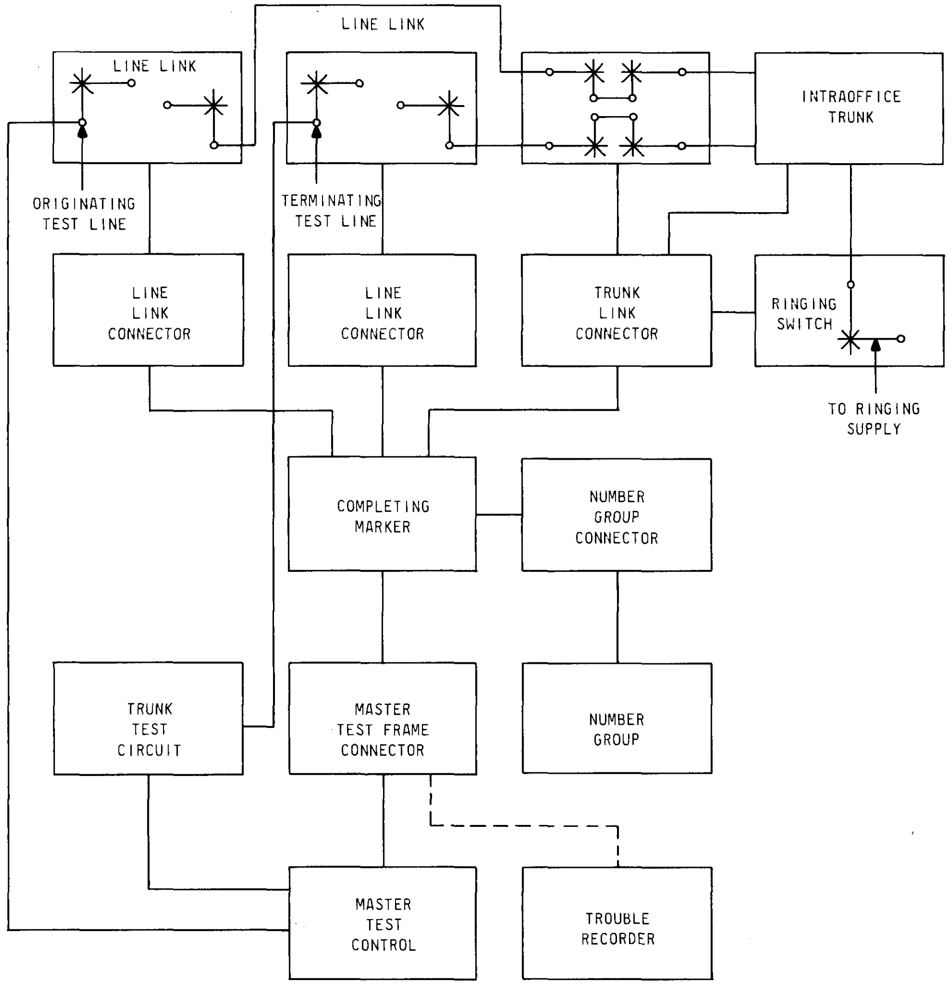
ISSUE 5

SFD-10-01-M009

INTRAOFFICE CLASS OF TRUNK TEST (IAO)



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M102	TEST FRAME SET-UP - IAO CLASS OF TEST
M103	RESERVED
M104	SEQUENCE CHART - IAO CLASS OF TEST
M105	SEQUENCE CHART - IAO CLASS OF TEST
M106	SEQUENCE CHART - IAO CLASS OF TEST
M107	RESERVED
M108	IAO TRUNK TEST ESTABLISHED TEST CONNECTION ON MTF
M109	IAO TRUNK TEST ESTABLISHED TEST CONNECTION ON MTF
M110	RINGING SWITCH CONNECTION IAO CALL

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

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PART M1
INTRAOFFICE CLASS OF TRUNK TEST
(IAO)

SFD-10-01-M101

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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INTRAOFFICE TRUNK CIRCUITS
TEST USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR
1	TRUNK SEIZURE AND RELEASE	218-247-501	A
2	RINGING FEATURES	218-247-501	B
3	PRETRIP AND TRIP	218-247-501	C
4	SUPERVISION - ORIGINATING AND TERMINAL DISCONNECT	218-247-501	D
5	SUPERVISION - ORIGINATING END DISCONNECT	218-247-501	E
6	SUPERVISION - TERMINATING END DISCONNECT	218-247-501	F
7	NONCHARGE SUPERVISION	218-247-501	G
8	TRUNK BUSY	218-247-501	0

BSP 218-247-501, ISS 9
SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-E902/E904/E906.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	68	IAO KEY	INTRAOFFICE CLASS OF TRUNK TEST CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT AND THEN TO A MARKER THROUGH THE MASTER TEST FRAME CONNECTOR CIRCUIT IN ORDER TO DIRECT THE MARKER TO SET UP A TEST CONNECTION TO THE INTRAOFFICE TRUNK UNDER TEST
	74	TSTB SW (IAO)	
1,2	7,WX	FACD KEY (OPR/N-OPR)	ORIGINATING/FOREIGN AREA CLASS WITH THE FACD KEY NORMAL OR THE CL SWITCH OPERATED TO OR-DP/MF, INDICATES A HOME OFFICE CODE.
	11,NQ	CL SW (OR-DP/MF/ FAC-DP/MF)	
	WW	NONE	
1,2	NT,OW	LOC TRNSL (ALL KEYS NORMAL)	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME MARKER FOR LOCAL TRANSLATION.
	11,NQ	TRNA SW (LT)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTTI KEY	
1	4,KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH THE THREE DIGIT OFFICE CODE (INTRAOFFICE ROUTE), ASSOCIATED WITH THE TERMINATING TEST LINE.
	4,ZVL	A-C SW (0-9)	
1	4	TTL KEY	TERMINATING TEST LINE OPERATED ON A TRUNK TEST TO TRANSMIT THE D-G DIGITS OF THE TERMINATING TEST LINE TO THE MARKER
1,2	7,RB	RC (1-15) KEY	RINGING COMBINATION CONTROLS THE RINGING COMBINATION SET UP BY THE MARKER ON THE RINGING SELECTION SWITCH.
	7,RC	RC (1-10) KEY	
		OTRC KEY	
	7,JF	RCU SW (1-10)	
	7,ZYH, ZV	RCT 1 KEY	
1,2	7,XA, XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37, GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDE RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1,2	7,ED	CSGA/ CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED.
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT. TLK KEY LOC ON TRUNK TEST PANEL.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
2	9	FS/ NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEYS OR SWITCH, WITH FS KEY OR WITHOUT NTFS KEY, FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS(0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
	79	FG (0-2) KEY	
	80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION
2	U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) AND FG(0-2) KEYS LOOK BUSY.
	80	FS SW (0-9)	
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0-19) KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED, WILL OPERATE THE TST RELAY IN THE TLF WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME.
2	9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-9) KEY LOOK BUSY TO THE MARKER.
	9,JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAM [illegible] 9) KEYS.
		TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.
2	9,QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9,QF	RA SW (0-5)	
	9,IB	RA SW (0-11)	
	9,CG	RAU SW (0-9)	
	9/99 DL	RATI KEY	
2	9	GPA/ GPB KEY	ALLOTTER GROUP A AND B USED ON TEST REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
3		PTP KEY	PRETRIP APPLIES A PRETRIP TEST TO THE RT RELAY IN THE INCOMING TRUNK. KEY LOC ON TRUNK TEST PANEL.
3		TRP KEY	TRIP APPLIES A TRIP TEST TO THE RT RELAY IN THE INCOMING TRUNK. KEY LOC ON TRUNK TEST PANEL.
3		ANS KEY	ANSWER WHEN OPERATED TO ANSWER EXTENDS THE TIP AND RING LEADS TOWARD A TERMINATING TEST LINE CONSISTING OF RESISTORS AND RELAYS SIMULATING AN INCOMING TRUNK CIRCUIT. THE RESISTANCE IN THIS LOOP GIVES AN OPERATE TEST TO CALLED PARTY SUPERVISORY RELAY OF THE TRUNK CIRCUITS. KEY LOC ON TRUNK PANEL.
3	4	KRC KEY	RINGING COMBINATION MAKES EFFECTIVE THE RC(1-15) KEYS FOR CONTROLLING RINGING COMBINATION.

ISSUE
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SFD-10-01-M102

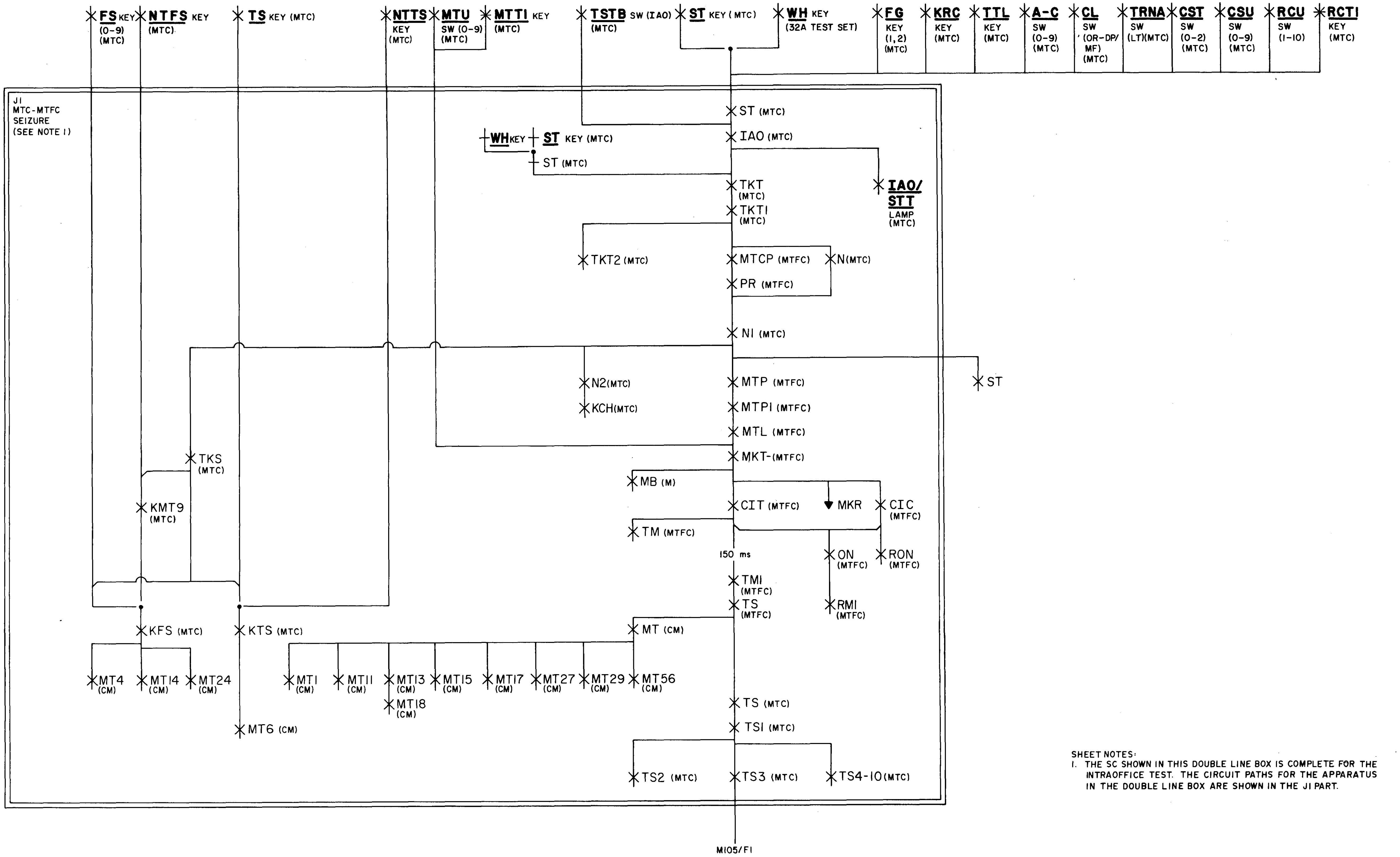
TEST FRAME SET-UP
INTRAOFFICE CLASS OF TRUNK TEST
(IAC)

PRINTED IN U. S. A.

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

INTRAOFFICE CLASS TRUNK TEST (IAO)



SHEET NOTES:
1. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE INTRAOFFICE TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE
5

SFD-10-01-M104

SEQUENCE CHART
INTRAOFFICE CLASS OF TEST-(IAO)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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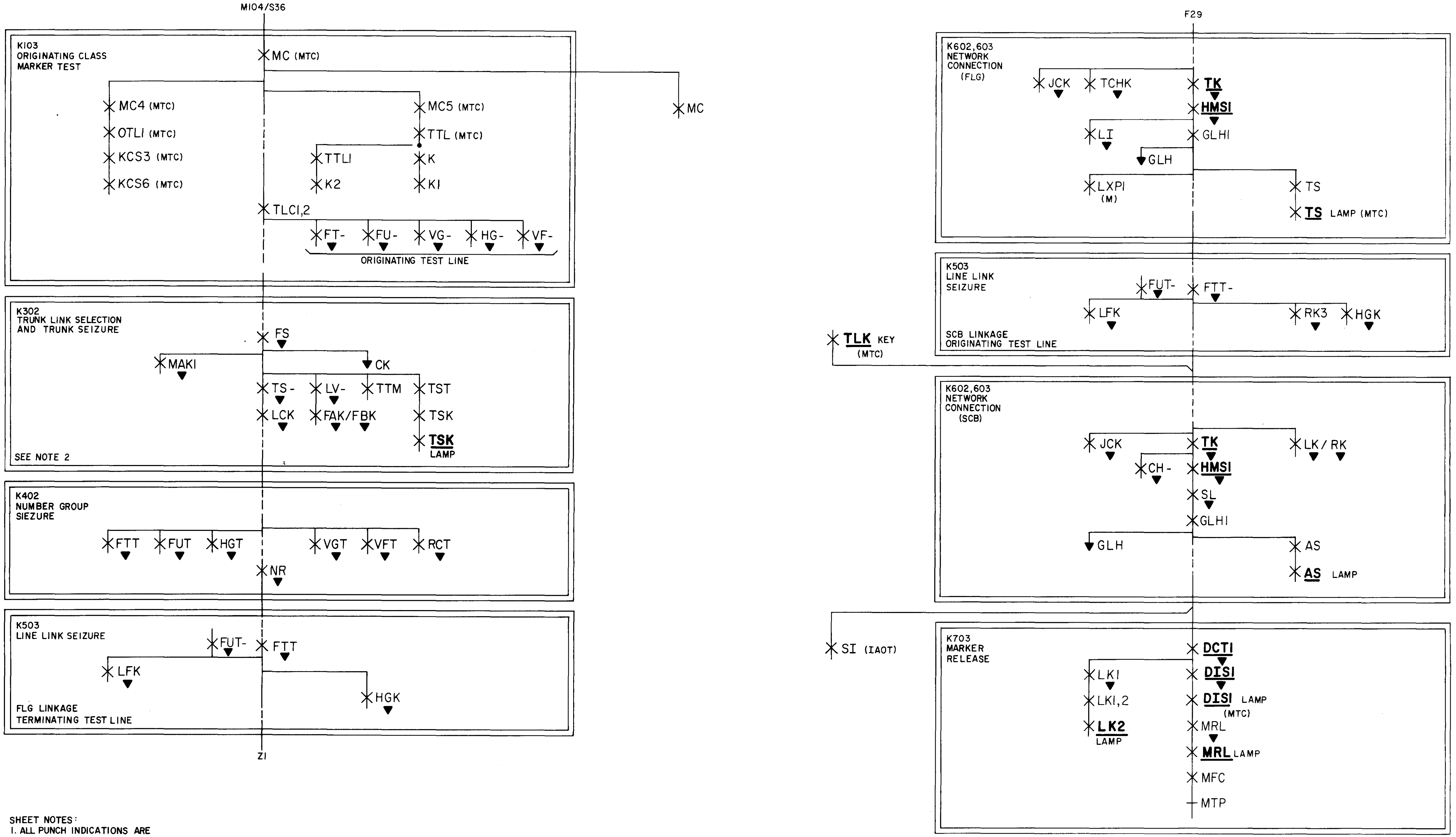
E-7481-L (4-73)



SHEET NOTES:
1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD27718-01)
2. (TST) RELAY OPERATES IN TRUNK LINK FRAME FROM OPERATED (NTTS) KEY, MTC.

SEQUENCE CHART
INTRAOFFICE CLASS
OF TEST (IAO)

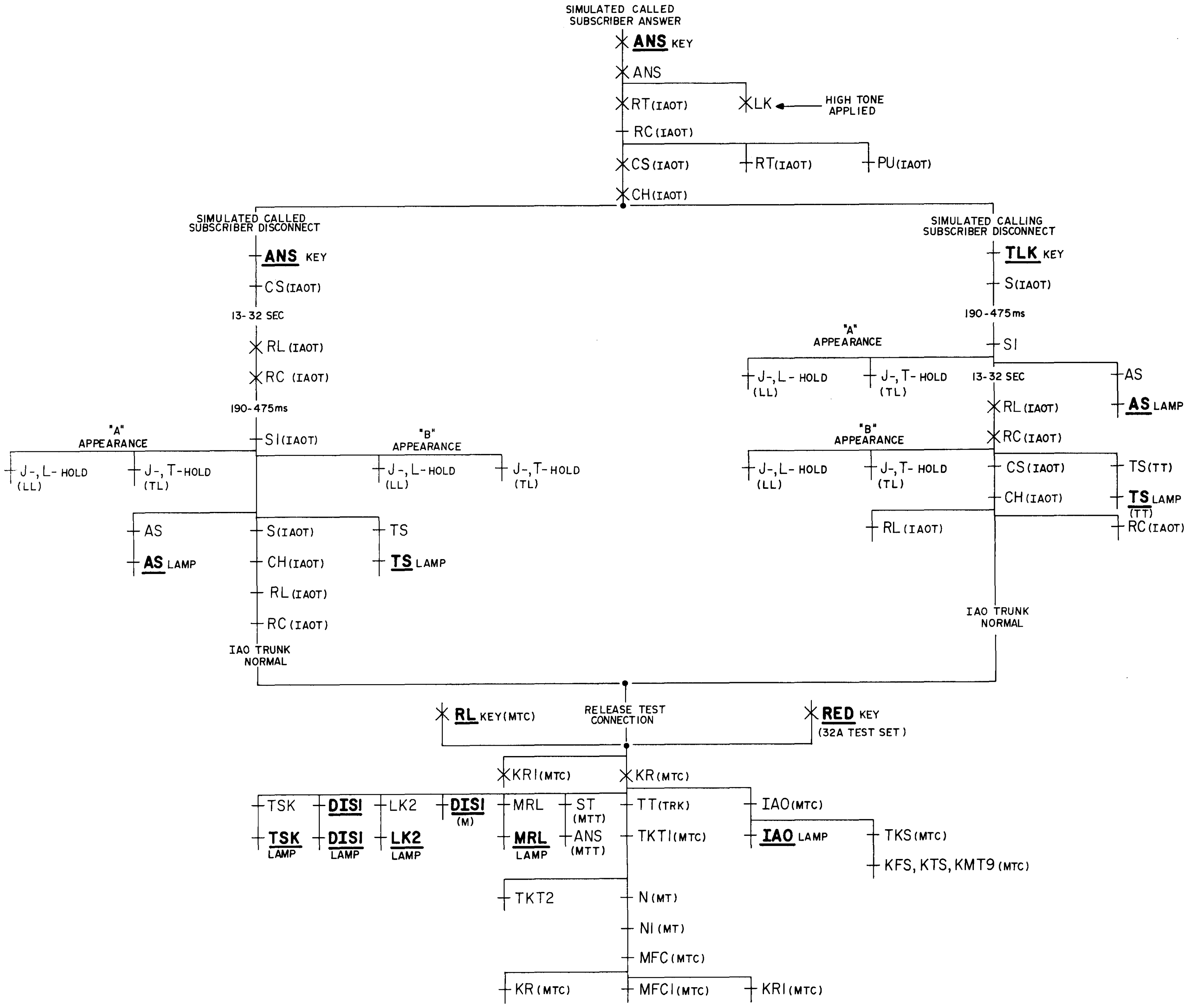
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M105

SFD-10-01-M105

BRUNING 44-131 28142

E-7421-8 (6-73) PRINTED IN U.S.A.



ISSUE
5

SFD-10-01-M106

SEQUENCE CHART
INTRAOFFICE CLASS
OF TEST (IAO)

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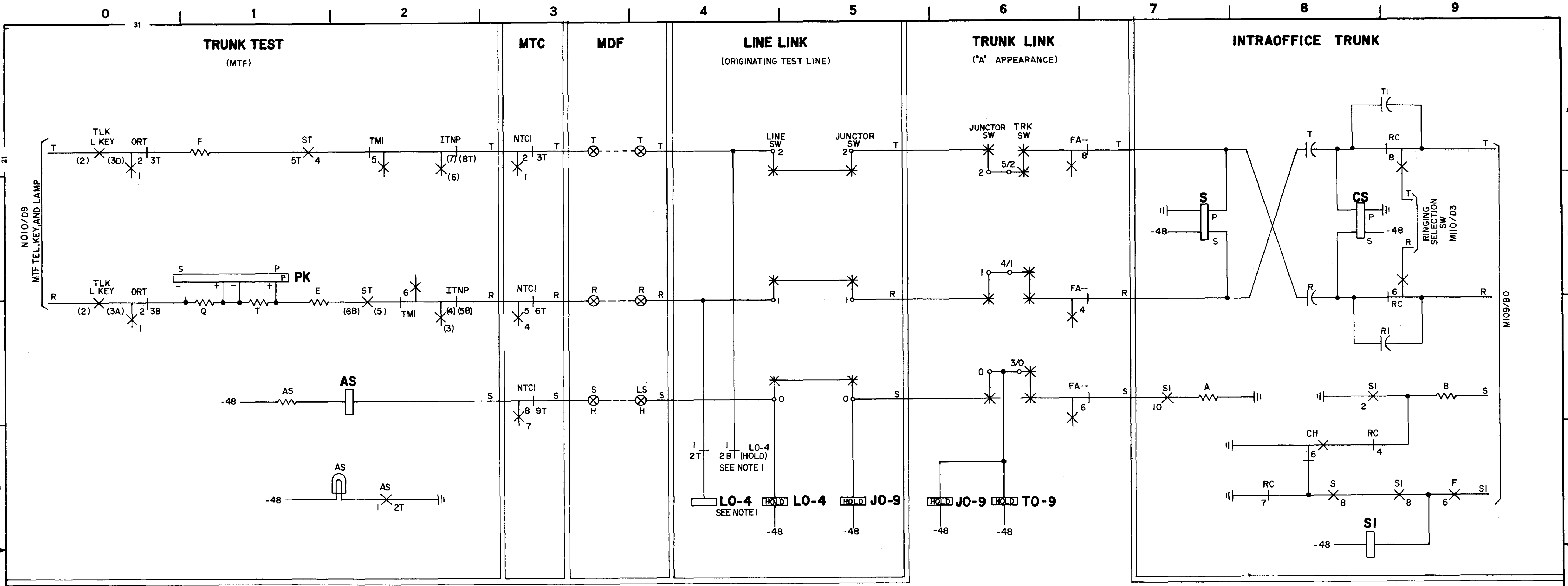
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L(4-73)

SFD-10-01-M106



SHEET NOTES:

1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING AND TERMINTING TEST LINES SHALL HAVE BATTERY DISCONNECTED FROM LO-4 RELAYS AND GROUND REMOVED FROM LO-4 (HOLD) CONTACTS 1 AND 2B.

ISSUE
5

SFD-10-01-M108

IAO TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

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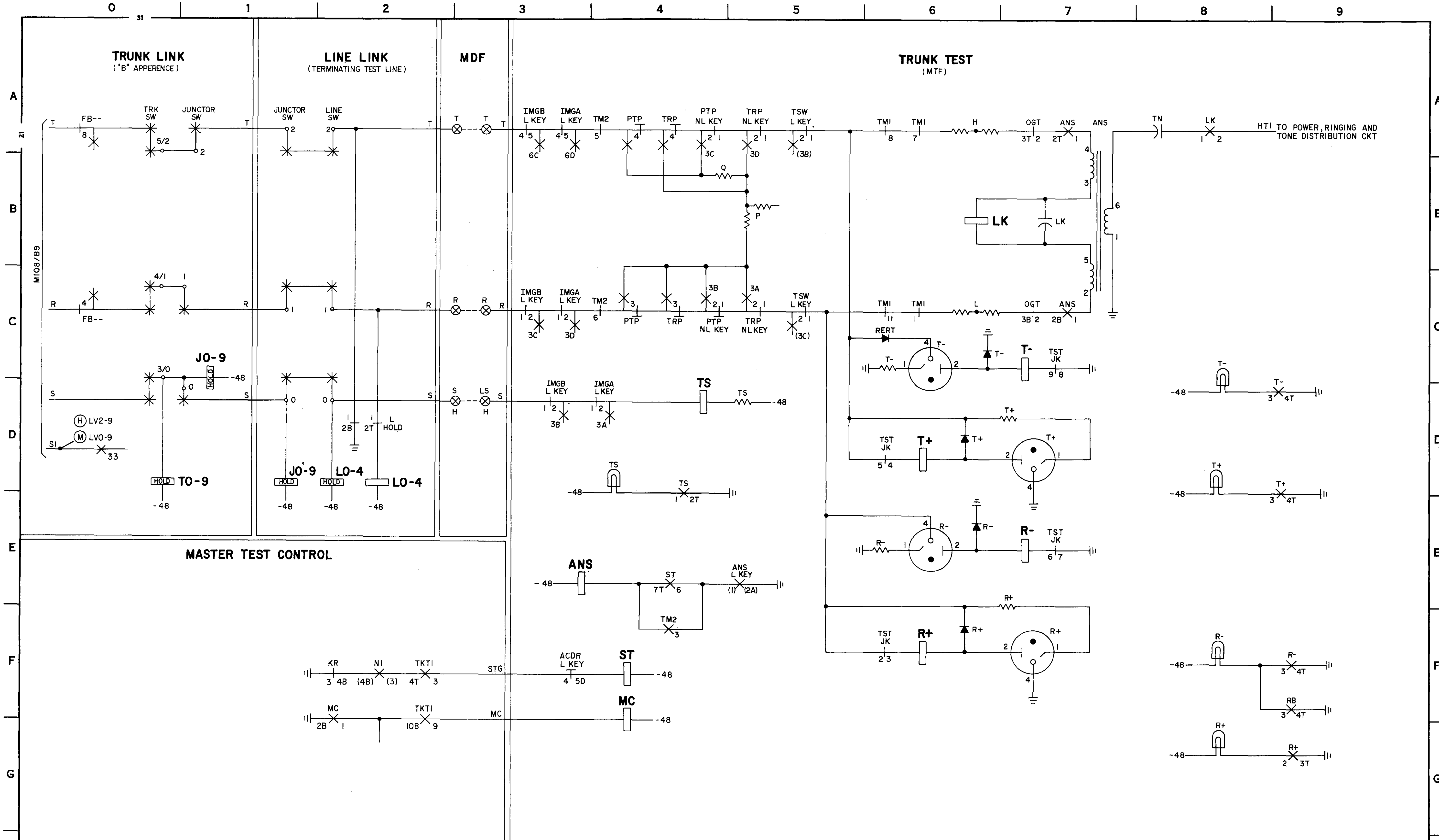
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-M108



SHEET NOTES:
1. OPTION ASSIGNMENTS:
(H) TRUNK LINK FRAME: SD-26032-01
(M) TRUNK LINK FRAME: SD-27879-01

ISSUE
5

1AO TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

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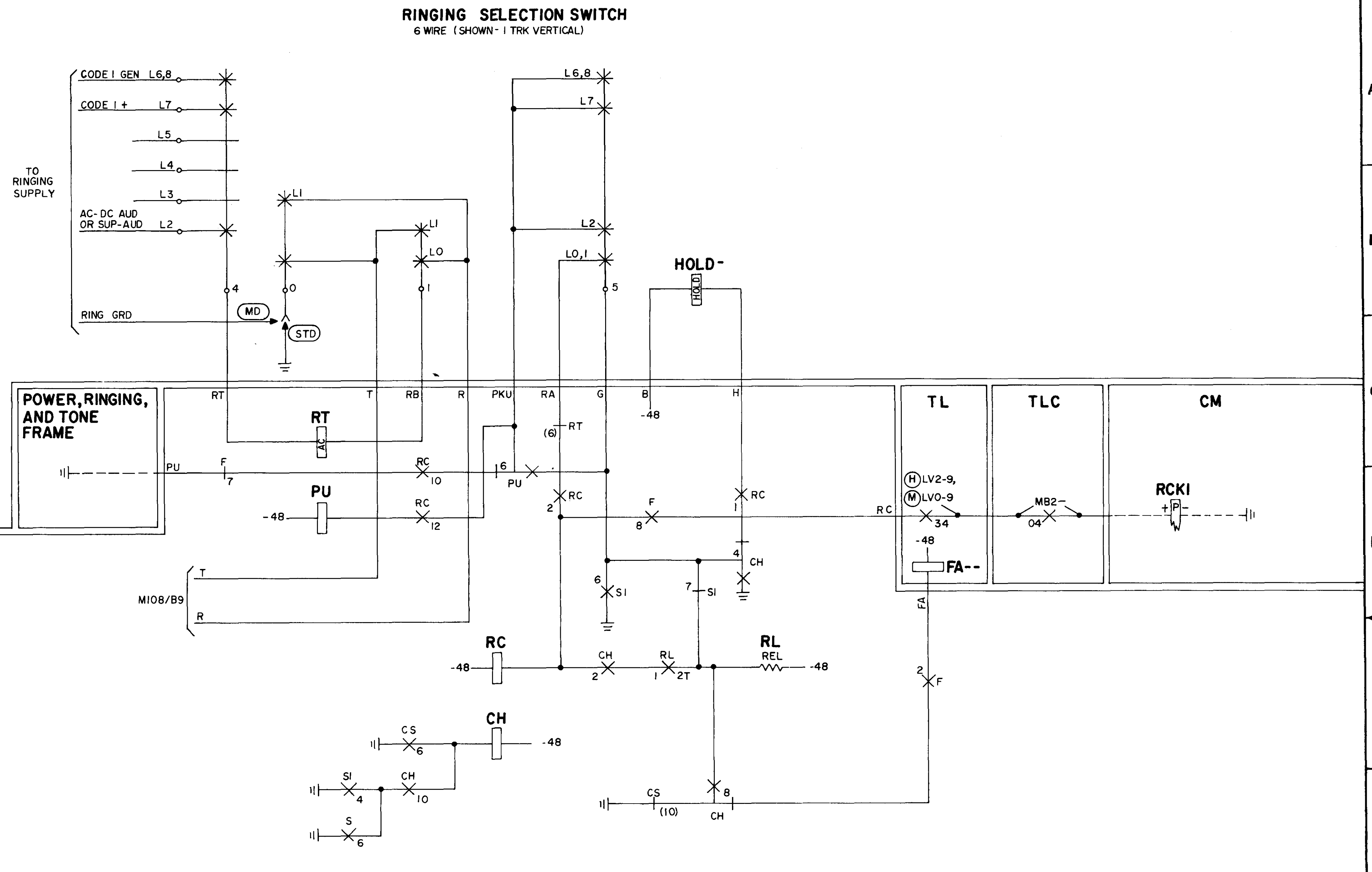
SFD-10-01-M109

SFD-10-01-M109

PARTY	RINGING COMBINATION (6-WIRE SW)	RS (SEL SW)	RINGING CURRENT TO TRUNK LEADS		TRANSMITTED TO CALLING SUBSCRIBER
			T	R	
1	1	0,6	RING GRD	CODE 1 GEN	AUD RING
PBX	10				
2	11	1,6	CODE 1 GEN	RING GRD	
3	6	0,7	RING GRD	CODE 1+	
4	7	1,7	CODE 11	RING GRD	
BUSY		1,9			60 IPM LOW TONE
OVERFLOW		0,9			120 IPM LOW TONE
REG INTERCEPT		0,2	RING GRD	AC-DC AUD OR SUP-AUD	AUD RING
TRL INTERCEPT		1,2	AC-DC AUD OR SUP-AUD	RING GRD	



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓗ TRUNK LINK FRAME; SD-26032-01

Ⓜ TRUNK LINK FRAME; SD-27879-01

ISSUE
5

SFD-10-01-M110

RINGING SWITCH CONNECTION
INTRAOFFICE CALL

DWG SIZE 6S

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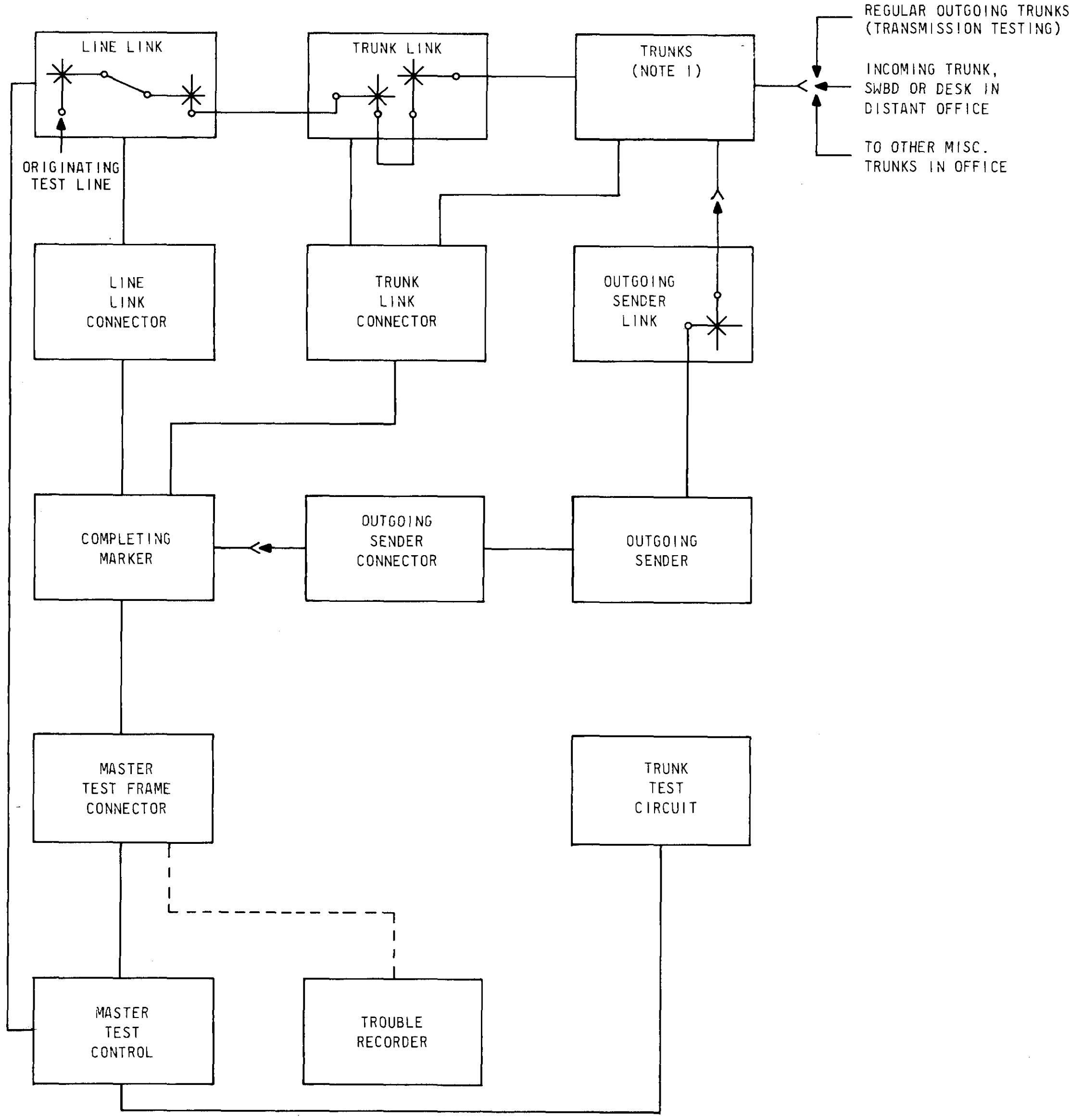
E-7481-L (4-7?)

SFD-10-01-M110

MISC. CLASS OF TRUNK TEST (MISC)



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M212	TRANSMISSION TEST CIRCUIT
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SHEET NOTES:

1. MISC. TRUNK TEST IS USED FOR THE FOLLOWING TYPE TRUNKS:
   - a. INFORMATION AND REPAIR
   - b. RECORDING COMPLETING TRUNKS
   - c. PERMANENT SIGNAL
   - d. COMMON OVERFLOW
   - e. ALL PATHS BUSY
   - f. NO - SUCH - NUMBER TONE
   - g. REVERTING CALL TRUNK
   - h. REGULAR OUTGOING TRUNKS (TRANSMISSION TESTING)

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART M2
MISC. CLASS OF TRUNK TEST
(MISC)

SFD-10-01-M201

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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MISCELLANEOUS TRUNK CIRCUITS
TEST USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR
1	COMMON OVERFLOW TRUNKS	218-280-501	A
2	PERMANENT SIGNAL TONE	218-280-501	B
3	ALL PATHS BUSY TONE (OVERFLOW)	218-280-501	E
4	NO-SUCH-NUMBER TONE	218-280-501	F
5	OGT TO INFORMATION AND REPAIR	218-280-501	H
6	REVERTING CALL TRUCK	218-279-501	A
7	RECORDING COMPLETING TRUCK	218-282-501	A

SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)
SD-25680-01 AUTOMATIC MONITOR REGISTER AND SENDER TEST (AMRST)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-C802/C804/C806).
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	68	MISC KEY	MISC CLASS OF TRUNK TEST CAUSES THE MTC CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT AND MARKER VIA THE MTFC IN ORDER TO DIRECT THE MARKER TO SET UP A TEST CONNECTION TO A TRUNK FOR MISC TEST. THE MISC CLASS OF TEST IS USED FOR OGT CIRCUITS WHEN IT IS DESIRED TO ESTABLISH A CONNECTION VIA THE TRUNK UNDER TEST TO THE DISTANT OFFICE. FOR THIS TEST THE TRUNK TT RELAY REMAINS NON-OPERATED.
	74	TSTB SW (MISC)	
1,2	17,WX	KACD KEY (OPR/N-OPR)	ORIGINATING/FOREIGN AREA CLASS WITH THE FACD KEY NORMAL OR THE CL SWITCH OPERATED TO OR-DP/MF, INDICATES A HOME OFFICE CODE. WITH THE FACD KEY OR CL SWITCH OPERATED TO FAC-DP/MF, INDICATES A FOREIGN AREA CODE.
	11,NQ	CL SW (OR-DP/MF, FAC-DP/MF)	
	WW	NONE	
1,2	11,OX	2DTO KEY	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME MARKER WITH NECESSARY ORIGINATING TRANSLATION FOR SELECTED ROUTE.
	17,NP	11/X11 KEY	
	17,SX	LT1 KEY	
	17,PH	LT2 KEY	
	11,EC	FVDO KEY	
	11,QY	LT3 KEY	
	NT,OW	LOC TRNSL (ALL KEYS NORMAL)	
	11,NQ	TRNA SW (LT/LT1/LT2/LT3/2DT/X11/11/FVD)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTT1 KEY	
1,2	4,KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH A THREE DIGIT AREA CODE OR THREE DIGIT OFFICE CODE.
	4,ZVL	A-C SW (0-9)	
1,2	4,KX	D(0-9) KEY	CALLED DIGITS (D-K) PRIMES THE MARKER WITH THE CALLED DIGITS.
	4,KY	E(0-9) KEY	
	4,KZ	F(0-9) KEY	
	4,JA	G(0-9) KEY	
	4,JB	H(0-9) KEY	
	4,JC	J(0-9) KEY	
	4,JD	K(0-9) KEY	
	4,ZVL	D-K SW (0-9)	

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT. TLK KEY LOC ON TRUNK TEST PANEL
1	4	KY KEY	CONNECT NUMBER ALLOWS ANY NUMBER ON KEYS OR SWS A(0-9) THRU L(0-9) TO BE TRANSMITTED TO THE MARKER.
1,2	7,XA, XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37 GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED.
1,2	7,ED	CSGA/ CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED.
1	1	ST/RL	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
2	9	FS/ NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG (0-2) KEYS AND FS (0-9) KEYS OR SWITCH, WITH (FS KEY) OR WITHOUT (NTFS KEY), FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS (0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
	79	FG (0-2) KEY	
	80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
2	U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS (0-9) ON FG (0-2) KEYS LOOK BUSY.
	80	FS SW (0-9)	
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS (0-19). KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED. WILL OPERATE THE "TST" RELAY IN THE TLF WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINE FRAME.

ISSUE
5

SFD-10-01-M202

TEST FRAME SET UP
MISC CLASS OF TRUNK TEST

PRINTED IN U.S.A.
DWG SIZE 6S
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SD-25800-01

* SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
2	9, KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS (0-9) KEY LOOK BUSY TO THE MARKER.
	9, JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS (TS0-19) KEY.
		TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.
2	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER.
2	8, 35	SGA/ SGB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.
2	8, 35	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP.
	84	OS SW (0-4)	
2	9, QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9, QF	RA SW (0-5)	
	9, IB	RA SW (0-11)	
	9, CG	RAU SW (0-9)	
	9/99, DL	RATI KEY	
2	9	GPA/GPB KEY	ALLOTTER GROUP A AND B USED ON TESTS REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
3	1	REC KEY	RECORD CAUSES MARKER TO REQEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING.
3	17	TP/ PMM KEY	TIP PARTY/PARTY MISMATCH TP KEY OPERATED SIGNALS THE MARKER THAT A TIP PARTY CALL IS BEING HANDLED. PMM KEY OPERATED SIGNALS THE MARKER OF A PARTY MISMATCH.
3	17, ZWM	PS KEY	PERMANENT SIGNAL SIGNALS THE MARKER THAT IS HANDLING A PERMANENT SIGNAL CALL.
3	17, ZWM	PD KEY	PARTIAL DIAL SIGNALS THE MARKER THAT IT IS HANDLING A PARTIAL DIAL CALL.
3	17,	CNR KEY	COIN RETURN SIGNALS THE MARKER THAT THE COIN WAS RETURNED BY THE OR. USED IN SETTING UP TRUNKS HAVING NO COIN RETURN FEATURES OF THEIR OWN.
3	17, K	SCN KEY	STUCK COIN SIGNALS THE MARKER THAT THERE IS A STUCK COIN.
3	4	TTL/BB KEY	TERMINATING TEST LINK OPERATED ON TRUNK TESTS TO CAUSE AN INCOMING TRUNK TEST LINE NUMBER TO BE TRANSMITTED TO THE MARKER USED TO SET UP THE TEST CONNECTION. BUSYBACK CAUSES PERMANENTLY BUSY NUMBER TO BE TRANSMITTED TO THE MARKER.
3	4	KRC	CONNECT NUMBER AND RINGING COMBINATION ALLOWS ANY NUMBER ON KEYS A(0-9) THROUGH K(0-9) TO BE TRANSMITTED TO THE MARKER AND MAKES EFFECTIVE THE RC(1-15) KEYS FOR CONTROLLING RINGING COMBINATION.

* SEE SHEET M202 FOR SHEET NOTES

ISSUE
5

TEST FRAME SET UP
MISC CLASS OF TRUNK TEST

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

SFD-10-01-M203

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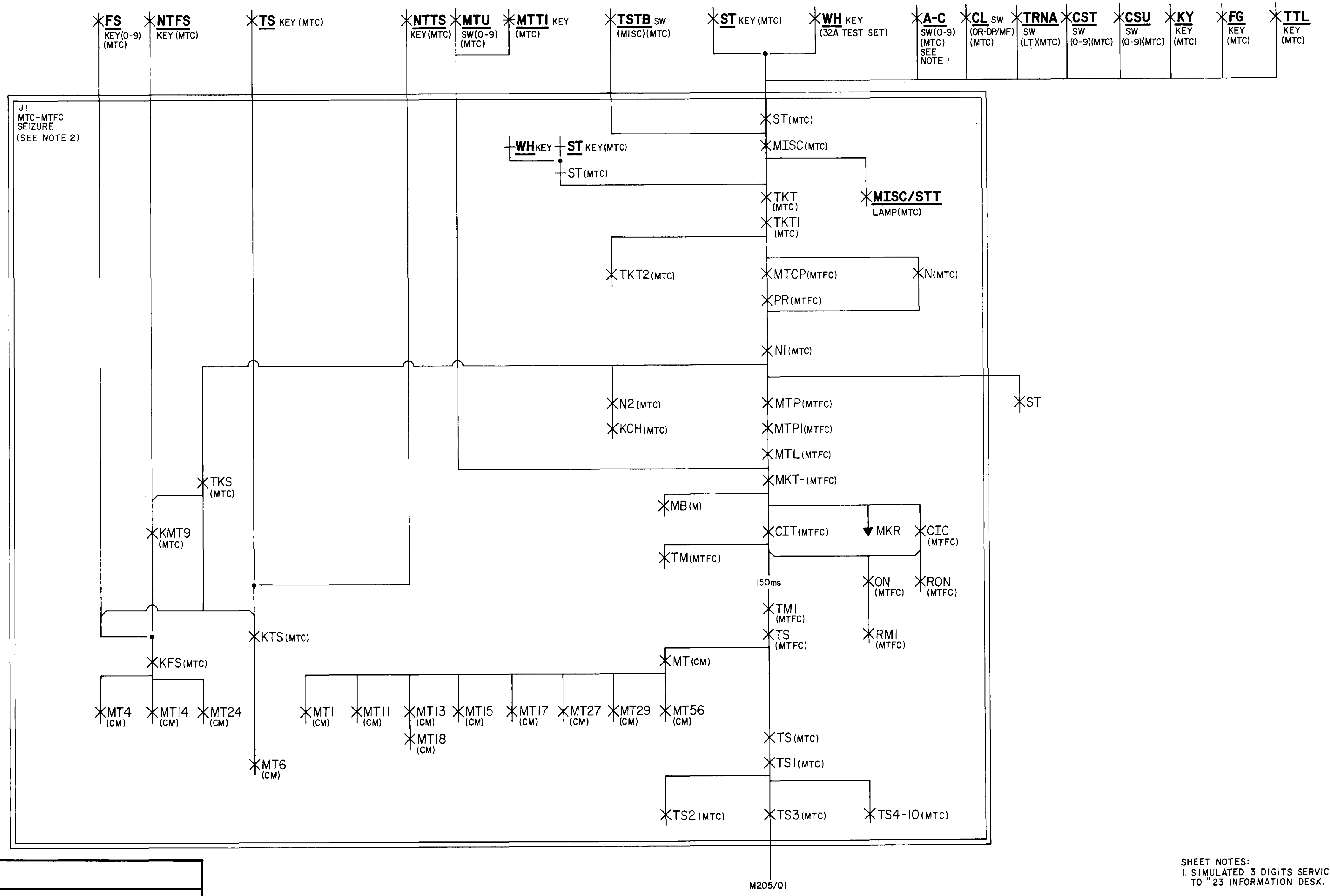
MISCELLANEOUS CLASS OF TRUNK TEST (MISC)



SHEET NOTES:

1. SIMULATED 3 DIGITS SERVICE CALL (411) TO "23 INFORMATION DESK.
2. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE MISCELLANEOUS TEST. THE CIRCUIT PATHS FOR APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE	DWG SIZE	SEQUENCE CHART MISCELLANEOUS CLASS OF TRUNK TEST (MISC)
5	6S	

SFD-10-01- M204 BELL LABORATORIES

SFD-10-01-M204

BRUNING 44-131 28142

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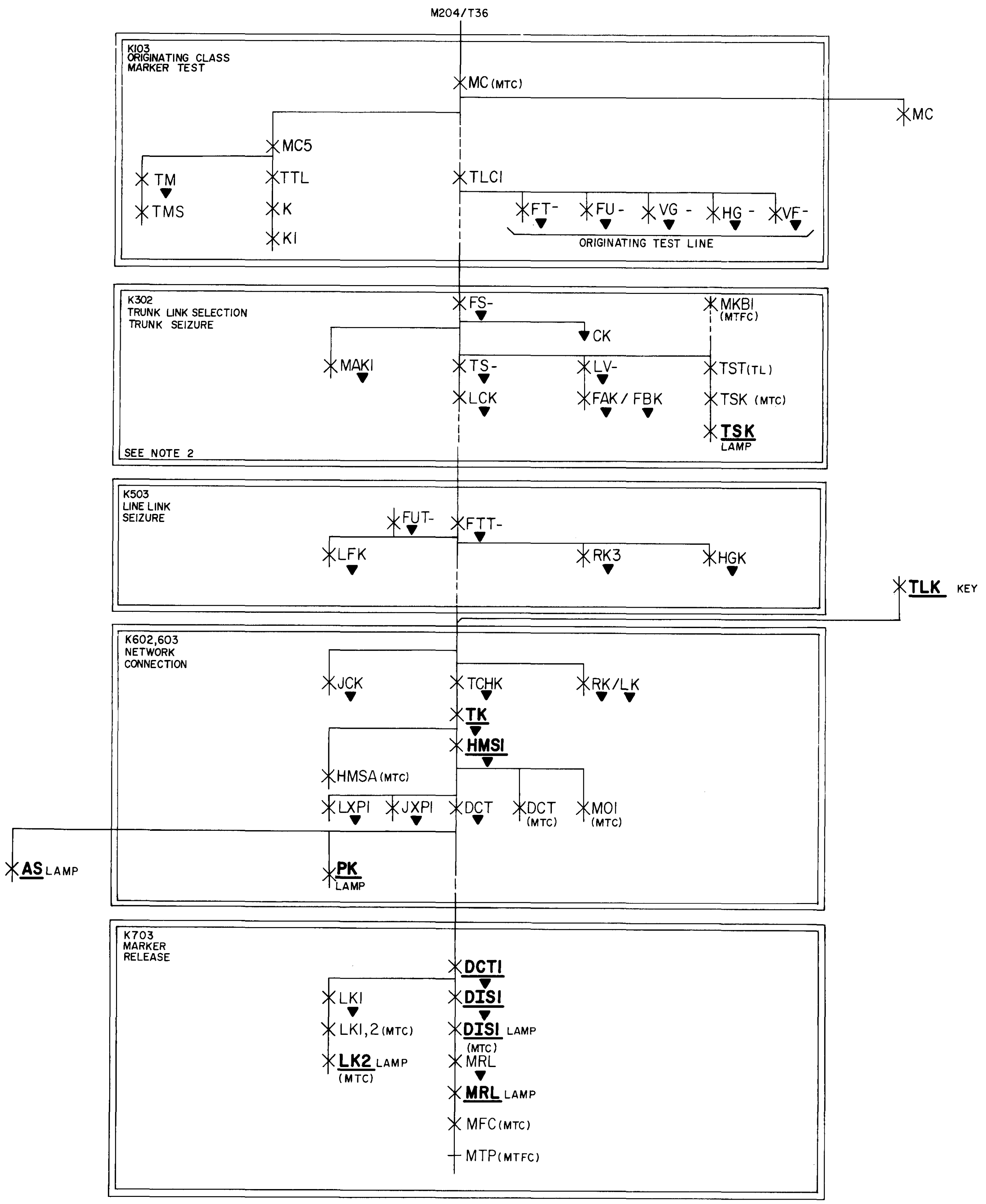


SHEET NOTES:

1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORDER CARDS (E-5488-CD27718-01)

2. (TST) RELAY OPERATES IN TRUNK LINK FRAME FROM OPERATED (NTTS) KEY MTC.

SEQUENCE CHART
MISCELLANEOUS CLASS OF TRUNK
TEST (MISC)

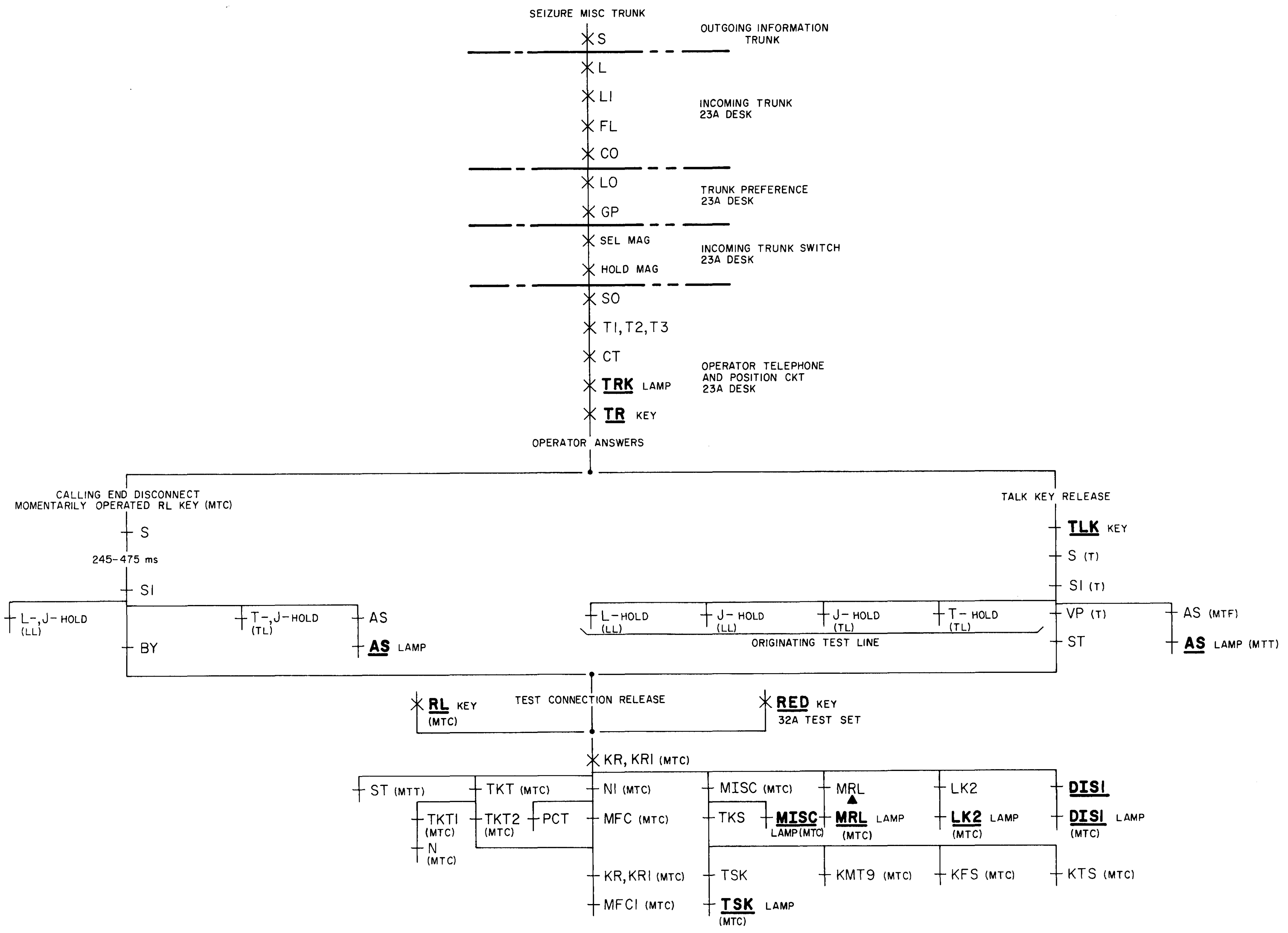
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01 M205

SFD-10-01-M205

BRUNING 44-131 28142

E-7421-8 (6-75) PRINTED IN U.S.A.



ISSUE
5

SFD-10-01-M206

SEQUENCE CHART
MISCELLANEOUS CLASS OF TRUNK
TEST-(MISC)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
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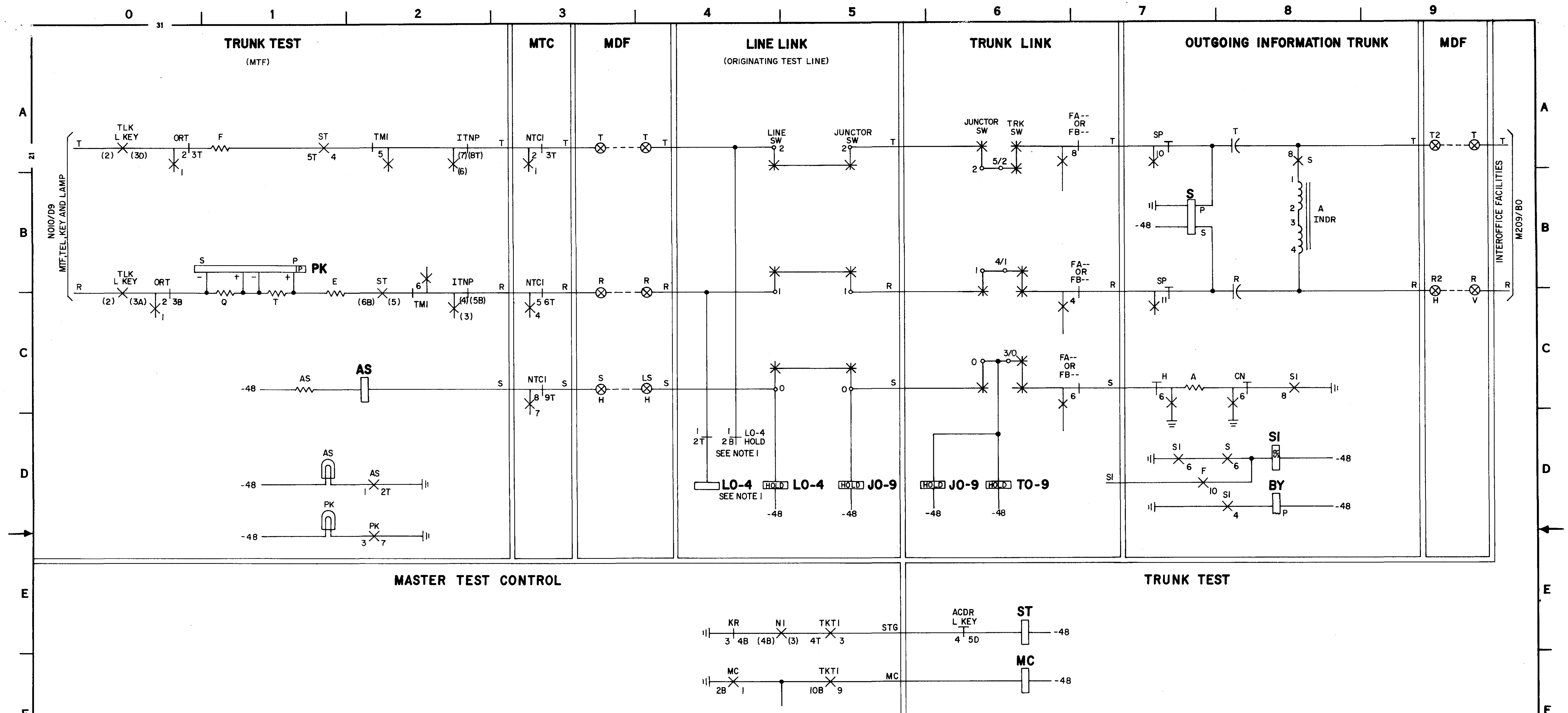
E-7481-L (4-73)



SHEET NOTES:

1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING TEST LINES SHALL HAVE BATTERY DISCONNECTED FROM LO-4 RELAYS AND GROUND REMOVED FROM LO-4 (HOLD) CONTACTS 1 AND 2B.

ISSUE
5

SFD-10-01-M208

MISC TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

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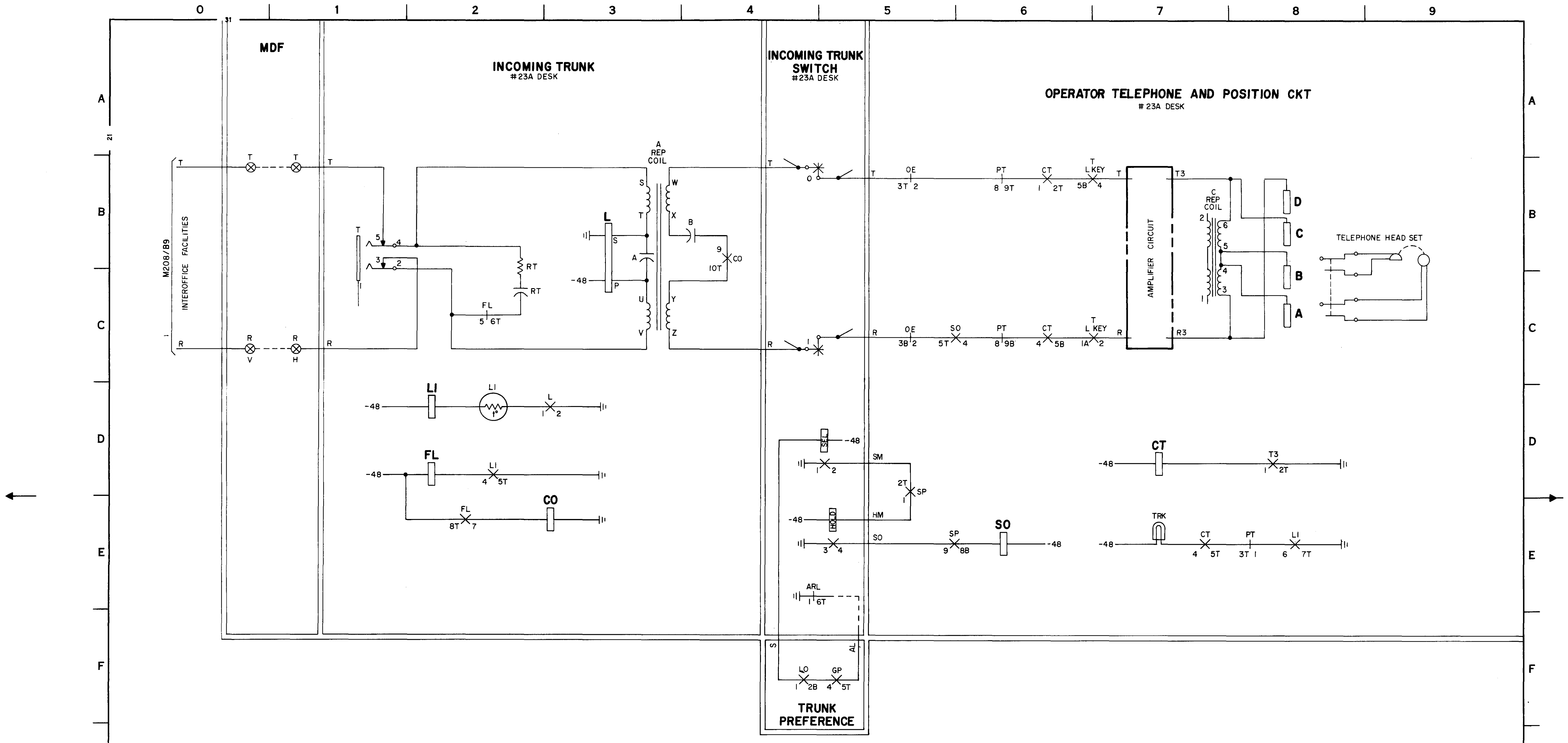
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-M208



MISC TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

SFD-10-01-M209

BELL TELEPHONE LABORATORIES
INCORPORATED

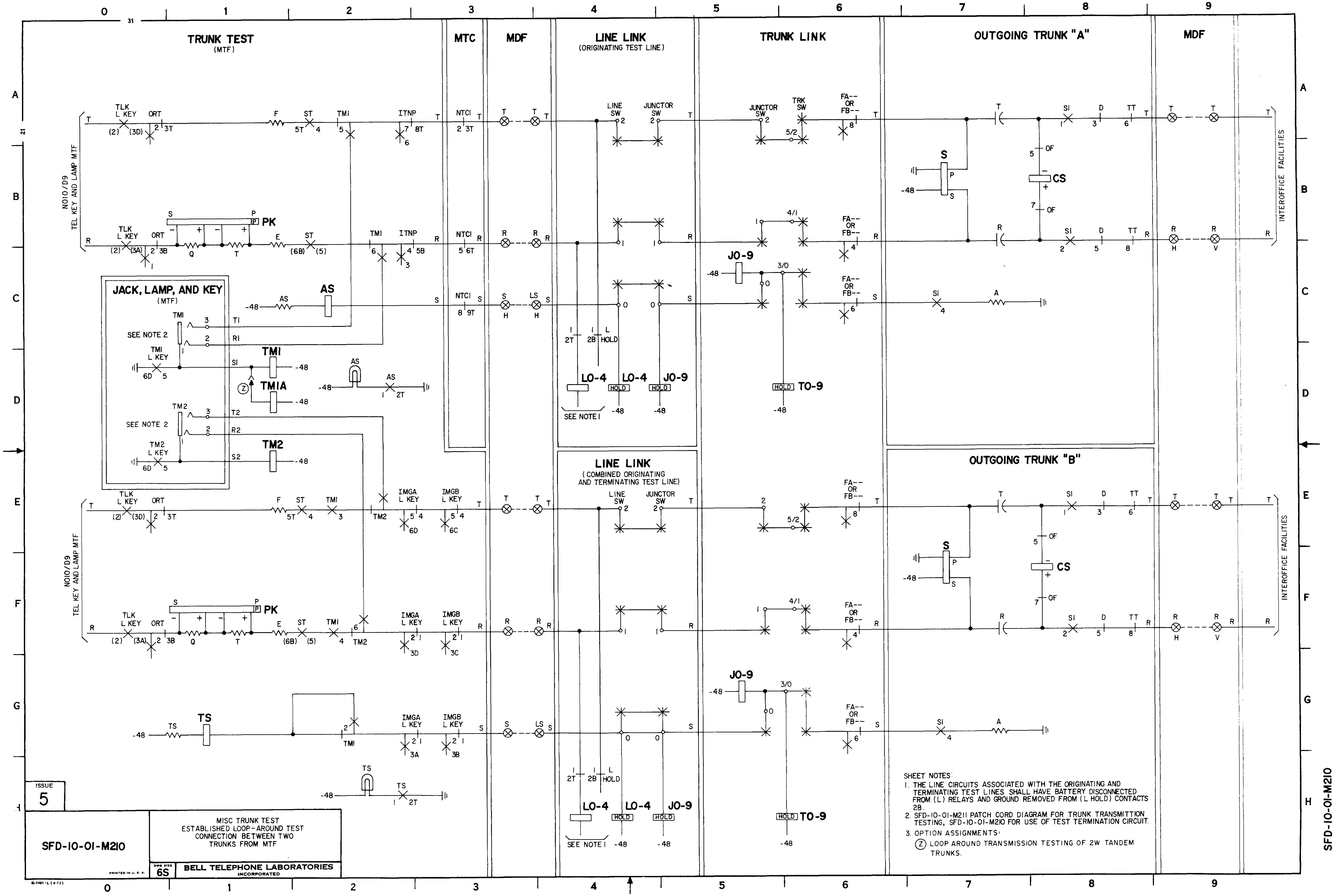
DWG SIZE 6S

PRINTED IN U.S.A.

ISSUE
5

SFD-10-01-M209

E-7421 (10-71)



SHEET NOTES:

1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING AND TERMINATING TEST LINES SHALL HAVE BATTERY DISCONNECTED FROM (L) RELAYS AND GROUND REMOVED FROM (L HOLD) CONTACTS 2B.
2. SFD-10-01-M211 PATCH CORD DIAGRAM FOR TRUNK TRANSMITTION TESTING, SFD-10-01-M210 FOR USE OF TEST TERMINATION CIRCUIT.
3. OPTION ASSIGNMENTS:

Ⓩ LOOP AROUND TRANSMISSION TESTING OF 2W TANDEM TRUNKS.

ISSUE
5

SFD-10-01-M210

MISC TRUNK TEST
ESTABLISHED LOOP-AROUND TEST
CONNECTION BETWEEN TWO
TRUNKS FROM MTF

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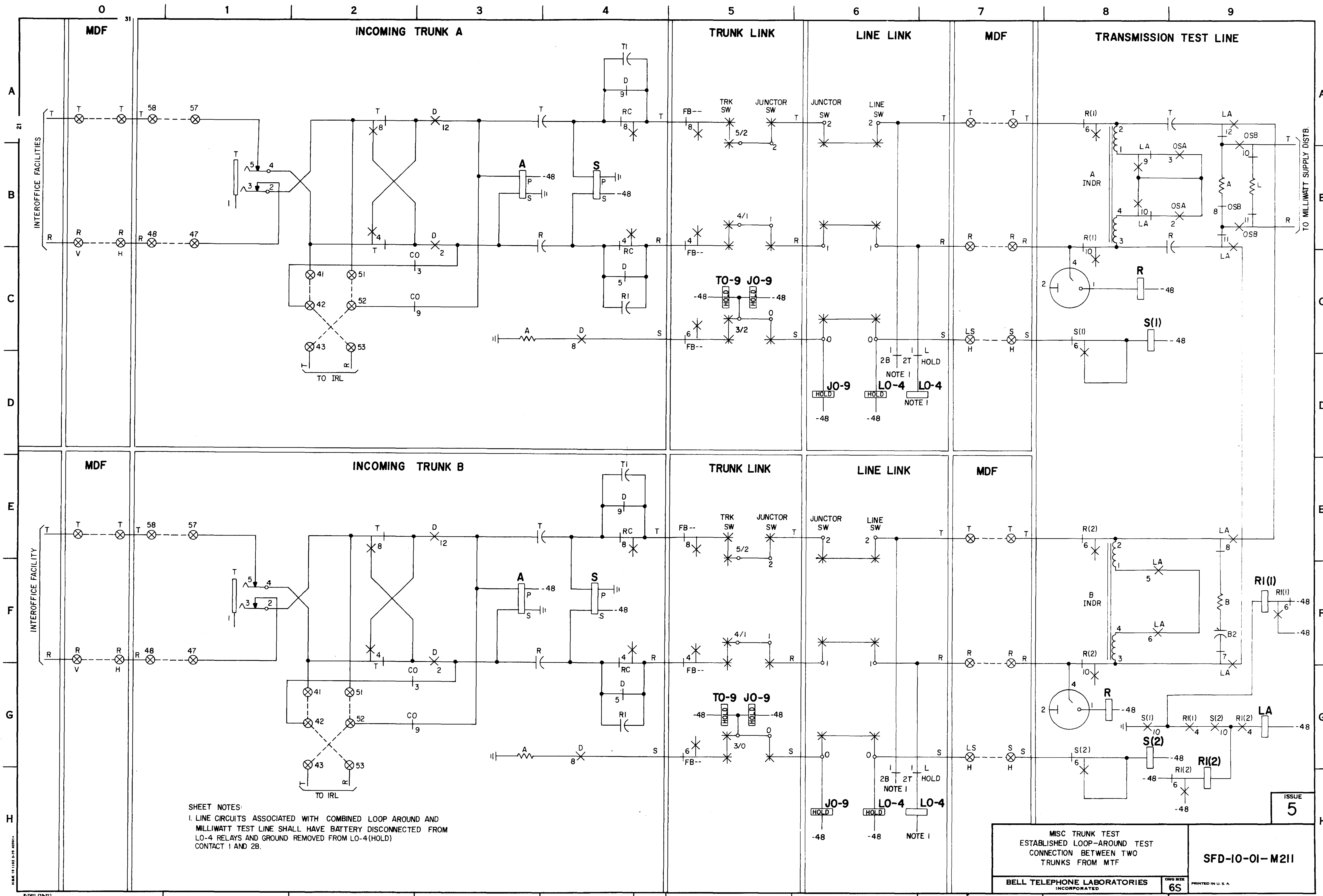
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-M210



SHEET NOTES:

1. LINE CIRCUITS ASSOCIATED WITH COMBINED LOOP AROUND AND MILLIWATT TEST LINE SHALL HAVE BATTERY DISCONNECTED FROM LO-4 RELAYS AND GROUND REMOVED FROM LO-4 (HOLD) CONTACT 1 AND 2B.

MISC TRUNK TEST
ESTABLISHED LOOP-AROUND TEST
CONNECTION BETWEEN TWO
TRUNKS FROM MTF

SFD-10-01-M211

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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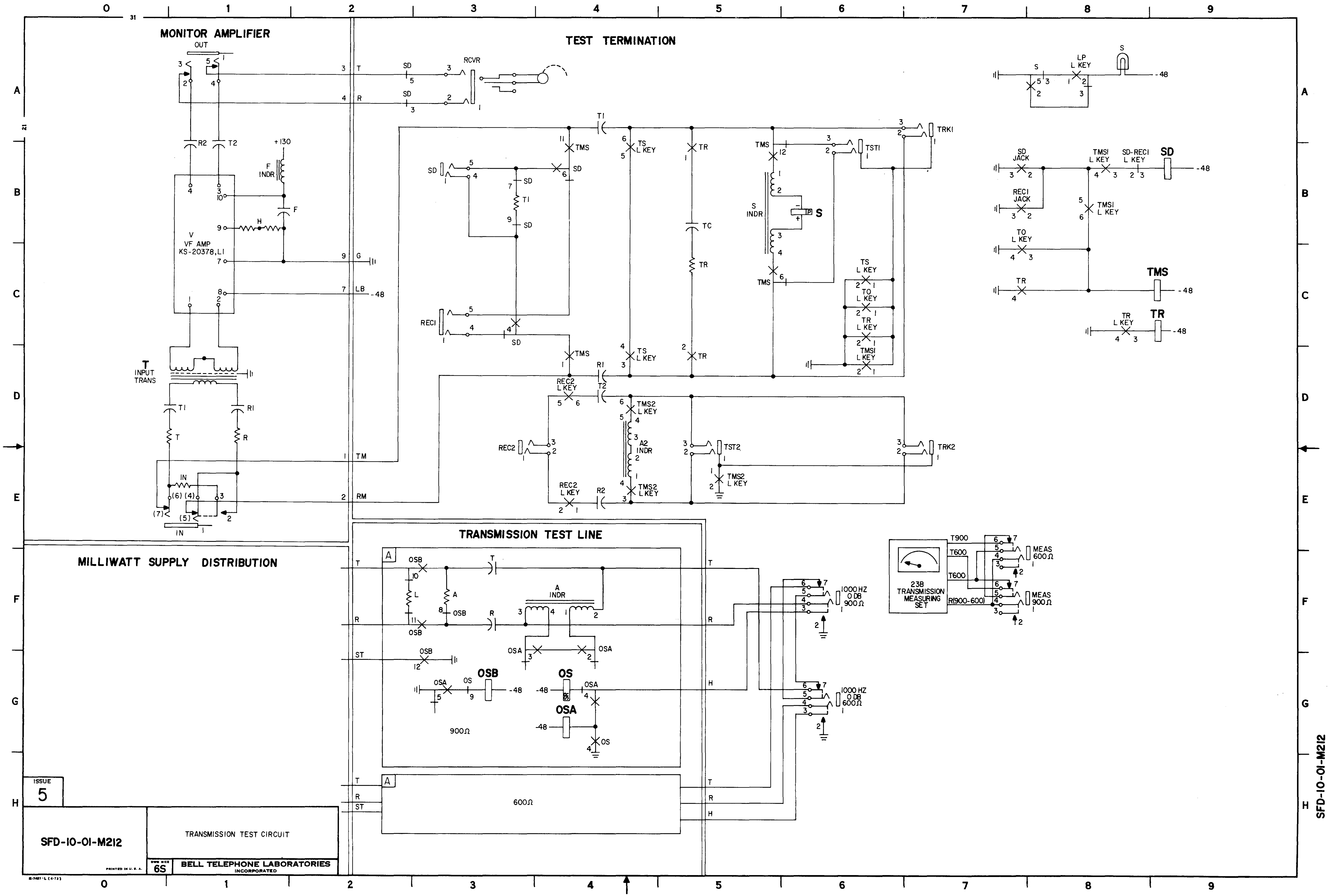
ISSUE 5

SFD-10-01-M211

E-7431 (10-71)



ISSUE
5

SFD-10-01-M212

TRANSMISSION TEST CIRCUIT

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
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E-7481-L (4-73)

SFD-10-01-M212

DIAGRAM FOR ONE-WAY 1000-HZ LOSS MEASUREMENT

(SEE BSP 218-246-501 FOR DETAILED DESCRIPTION)

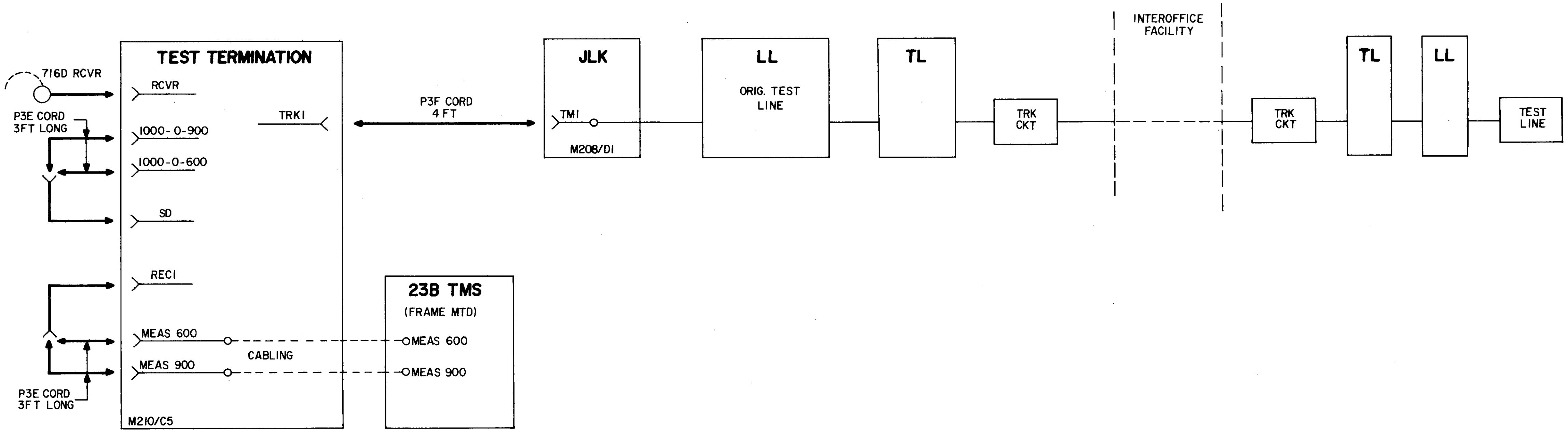
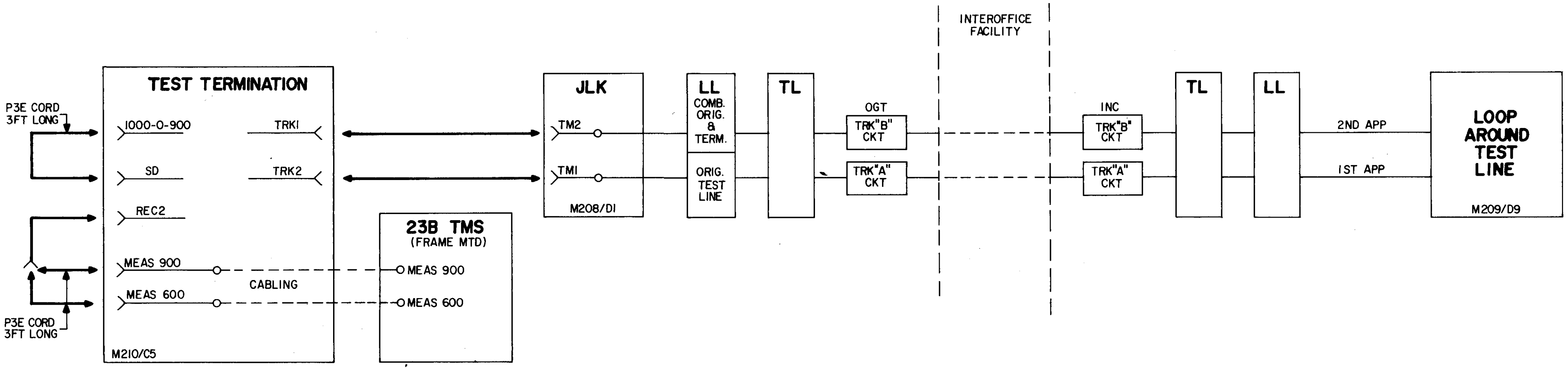


DIAGRAM FOR LOOP-AROUND TWO-WAY 1000-HZ LOSS MEASUREMENT

(SEE BSP 218-246-501 FOR DETAILED DISCRIPTION)



ISSUE
5

PATCH CORD DIAGRAM FOR
TRUNK TRANSMISSION TESTING

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

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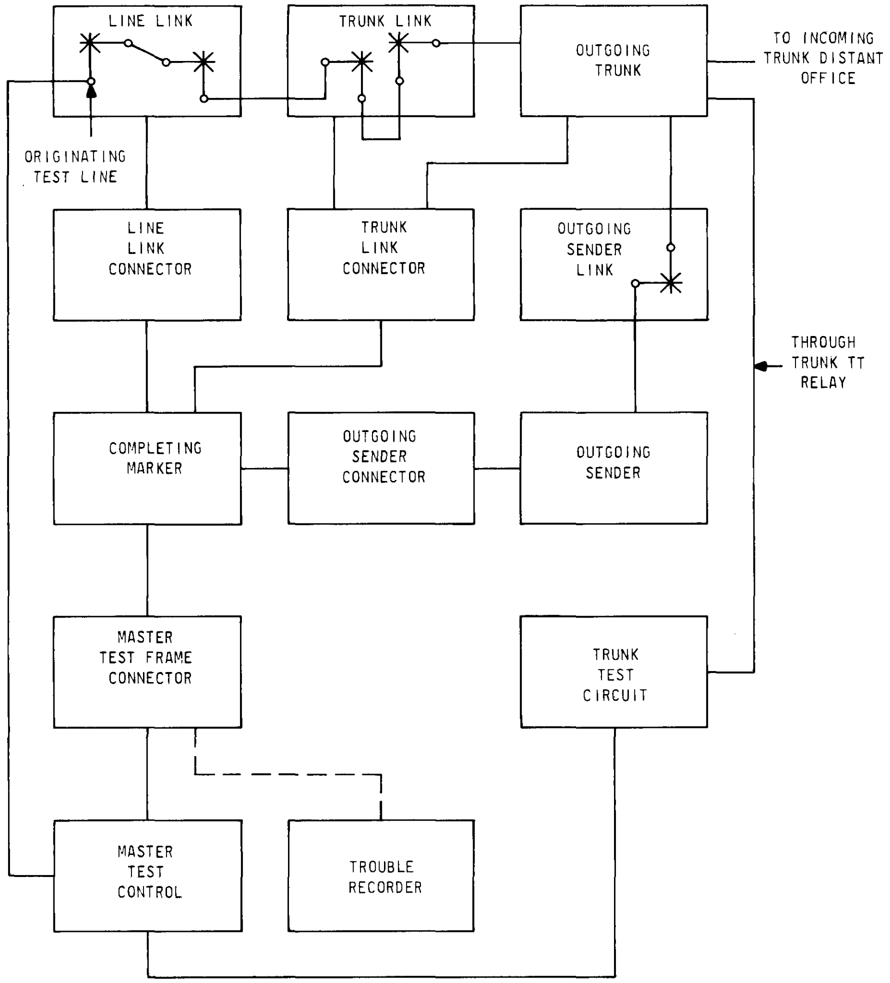
SFD-10-01-M213

INCOMING TRUNK IN DISTANT OFFICE CLASS OF TRUNK TEST (ITDO)



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M305	SEQUENCE CHART - ITDO CLASS OF TRUNK TEST
M306	SEQUENCE CHART - ITDO CLASS OF TRUNK TEST
M307	RESERVED
M308	ITDO TRUNK TEST - ESTABLISHED TEST CONNECTION ON MTF
M309	ITDO TRUNK TEST - ESTABLISHED TEST CONNECTION ON MTF

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART M3
INCOMING TRUNK IN DISTANT
OFFICE CLASS OF TRUNK TEST
(ITDO)

SFD-10-01-M301

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

OUTGOING TRUNK CIRCUITS (ITDO)
TEST USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR.
1	CALL TO TEST LINE	218-271-501	M

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	68	ITDO KEY	INCOMING TRUNK IN DISTANT OFFICE TRUNK TEST CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT AND THEN TO CONNECT TO A MARKER THROUGH THE MASTER TEST FRAME CONNECTOR CIRCUIT IN ORDER TO DIRECT THE MARKER TO SET UP A TEST CONNECTION TO THE OUTGOING TRUNK ASSOCIATED WITH THE INCOMING TRUNK UNDER TEST IN THE DISTANT OFFICE. THE MARKER IS DIRECTED TO SET UP A TEST LINE NUMBER IN THE SENDER WHICH IT CONNECTS TO THE OUTGOING TRUNK. THE SENDER IS USED TO DIRECT THE INCOMING TRUNK IN THE DISTANT OFFICE TO A TEST LINE. THE TT RELAY IN THE OUTGOING TRUNK IS OPERATED IN ORDER TO PROVIDE TEST ACCESS FOR THE TRUNK TEST CIRCUIT.
	74	TSTB SW (ITDO)	
1,2	17,WX	FACD KEY (OPR/N-OPR)	ORIGINATING/FOREIGN AREA CLASS WITH THE FACD KEY NORMAL OR THE CL SWITCH OPERATED TO THE OR-DP/MF, INDICATES A HOME OFFICE CODE, WHICH THE FACD KEY OR CL SWITCH OPERATED TO FAC-DP/MF, INDICATES A FOREIGN AREA CODE.
	11,NQ	CL SW (OR-DP/MF, FAC-DP/MF)	
	WW	NONE	
1,2	11,OX	2DTO KEY	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME MARKER WITH NECESSARY ORIGINATING TRANSLATION FOR SELECTED ROUTE.
	17,NP	11/X11 KEY	
	17,SX	LT1 KEY	
	17,PH	LT2 KEY	
	11,EC	FVDO KEY	
	11,OY	LT3 KEY	
	NT,OW	LOC TRNSL (ALL KEYS) NORMAL)	
	11,NQ	TRNA SW (LT/LT1/ LT2/LT3/ 2DT/X11/ 11/FVD	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTO SW (0-9) MTT1 KEY	
1,2	4,KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH A THREE DIGIT AREA CODE OR THREE DIGIT OFFICE CODE.
	4,ZVL	A-C SW (0-9)	
1,2	4,KX	D(0-9) KEY	CALLED DIGITS (D-K) PRIMES THE MARKER WITH THE CALLED DIGITS.
	4,KY	E(0-9) KEY	
	4,KZ	F(0-9) KEY	
	4,JA	G(0-9) KEY	
	4,JB	H(0-9) KEY	
	4,JC	J(0-9) KEY	
	4,JD	K(0-9) KEY	
	4,ZVL	D-K SW (0-9)	

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT.
1	4	KY KEY	CONNECT NUMBER ALLOWS ANY NUMBER ON KEYS OR SWITCHES A(0-9) THRU L(0-9) TO BE TRANSMITTED TO THE MARKER.
1,2	7,XA, XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37, GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7, JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED.
1,2	7,ED	CSGA/ CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
2	9	FS/ NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEYS OR SWITCH, WITH (FS) KEY OR WITHOUT (NTFS) KEY, FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS(0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
	79	FG (0,2) KEY	
	80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
2	U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) ON FG(0-2) KEYS LOOK BUSY.
	80	FS SW (0-9)	
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0-19) KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED, WILL OPERATE THE TST RELAY IN THE TLF WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME.
2	9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-9) KEY LOOK BUSY TO THE MARKER.
	9,JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS (TS0-19) KEY.
		TST1 KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-C802/C804/C806).
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

ISSUE
5

SFD-10-01-M302

TEST FRAME SET UP
ITDO CLASS OF TRUNK TEST

PRINTED IN U. S. A.

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SD-25800-01

*SEE NOTE	FIG.OR OPT	KEY OR SWITCH	FUNCTION
3	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER.
2	8, 35	SGA/ SGB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED, DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.
2	8, 83	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP.
	84	OS SW (0-4)	
2	9,QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9,QF	RA SW (0-5)	
	9,IB	RA SW (0-11)	
	9,CG	RAU SW (0-9)	
	9/99, DL	RATI KEY	
2	9	GPA/GPB KEY	ALLOTTER GROUP A AND B USED ON TESTS REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
3	1	REC KEY	RECORD CAUSES MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING.
3	4	TTL/BB KEY	TERMINATING TEST LINE OPERATED ON TRUNK TESTS TO CAUSE AN INCOMING TRUNK TEST LINE NUMBER TO BE TRANSMITTED TO THE MARKER USED TO SET UP THE TEST CONNECTION. BUSYBACK CAUSES PERMANENTLY BUSY NUMBER TO BE TRANSMITTED TO THE MARKER.
3	1,XH	ANS KEY	ANSWER OPERATED EXTENDS TIP AND RING LEADS TOWARD A TERMINATING TEST LINE CONSISTING OF RESISTORS AND RELAYS SIMULATING AN INCOMING TRUNK. THE RESISTANCE IN THIS LOOP GIVES AN OPERATE TEST TO CALLED PARTY SUPERVISORY RELAY OF THE TRUNK CIRCUITS. ANS KEY LOC ON TRUNK TEST PANEL.

* SEE SHEET M302 FOR SHEET NOTES.

ISSUE
5

TEST FRAME SET UP
ITDO CLASS OF TRUNK TEST

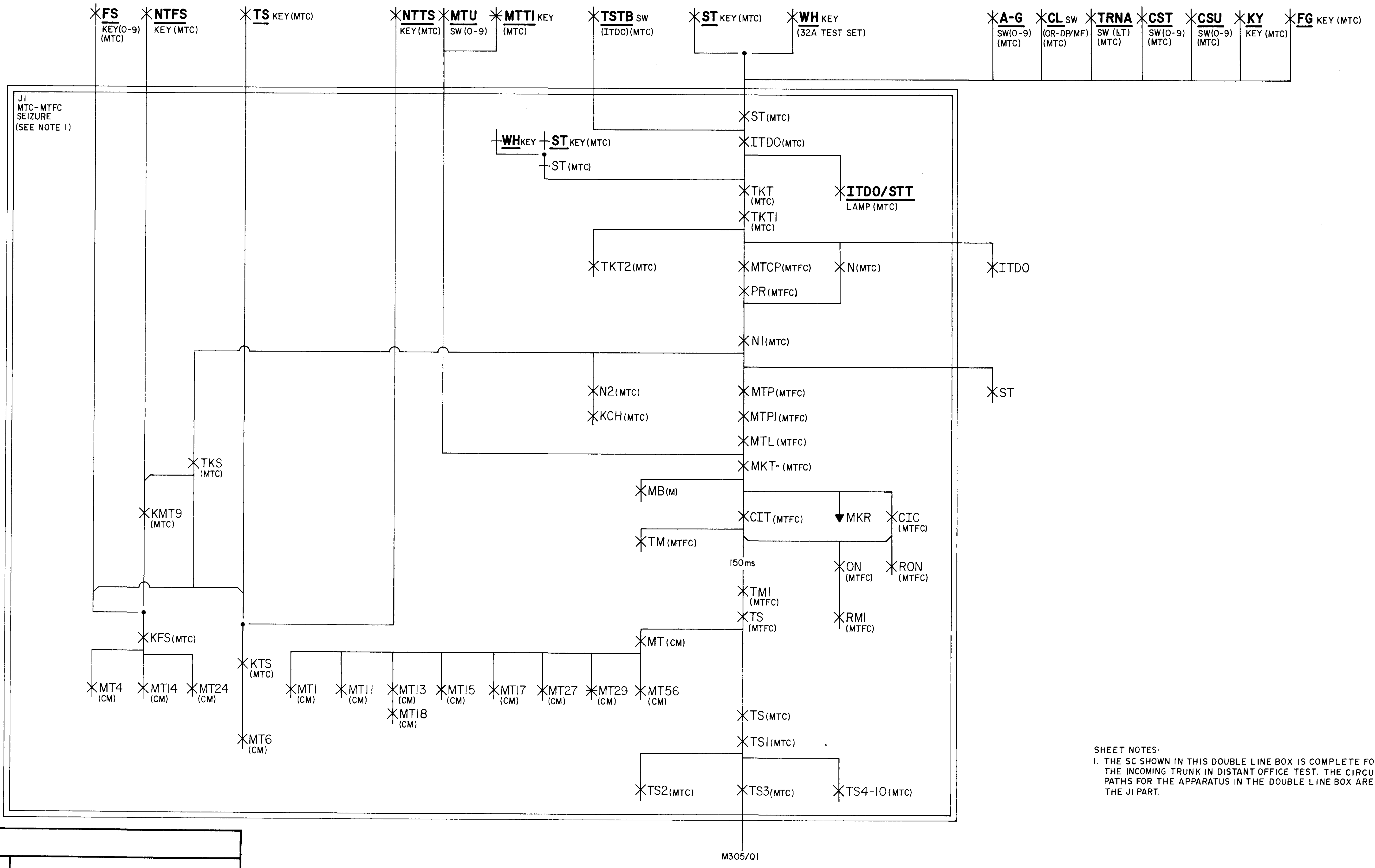
SFD-10-01-M303

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

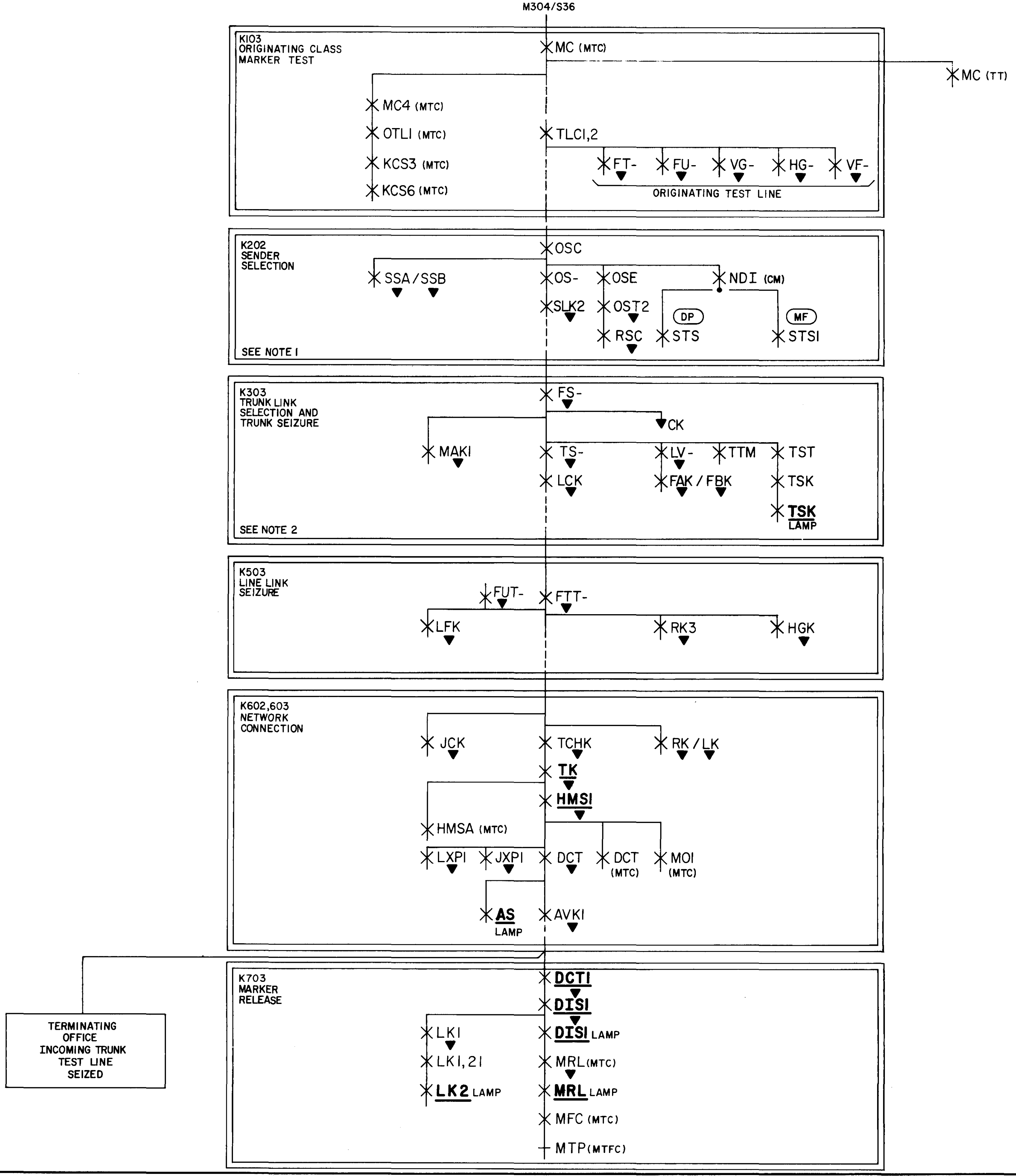
PRINTED IN U.S.A.

INCOMING TRUNK IN DISTANT OFFICE CLASS OF TRUNK TEST (ITDO)



SHEET NOTES:
1. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE INCOMING TRUNK IN DISTANT OFFICE TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE IN THE J1 PART.

ISSUE 5	DWG SIZE 6S	SEQUENCE CHART INCOMING TRUNK IN DISTANT OFFICE CLASS OF TRUNK TEST (ITDO)
SFD-10-01-	M304	BELL LABORATORIES



SHEET NOTES:
1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD27718-01)
2. (TST) RELAY OPERATES IN TRUNK LINK FRAME FROM OPERATED (NTTS) KEY MTC

SEQUENCE CHART
INCOMING TRUNK IN DISTANT
OFFICE CLASS OF TRUNK TEST (ITDO)

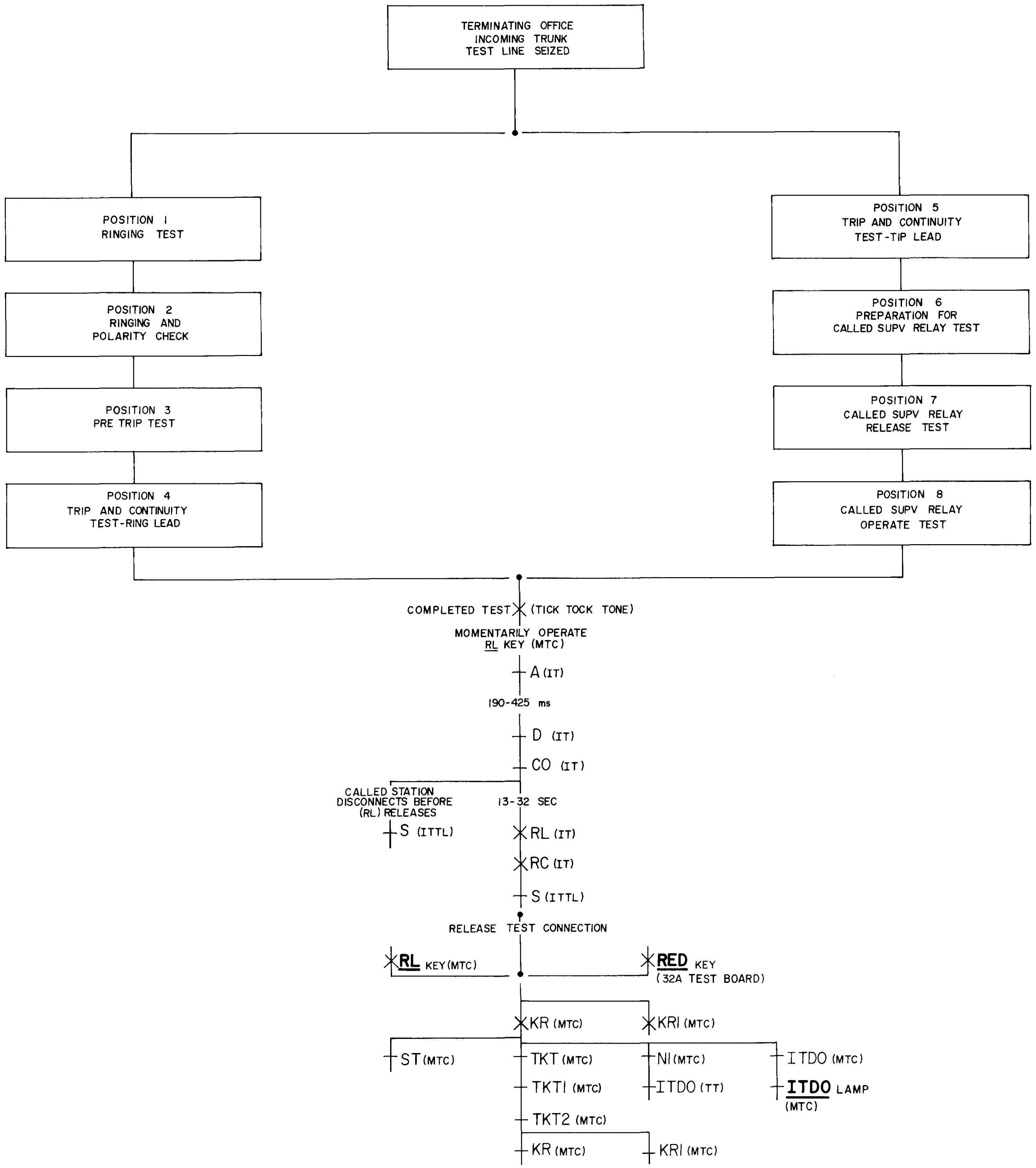
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M305

SFD-10-01-M305

BRUNING 44-131 28142

E-7421-8 (8-75) PRINTED IN U.S.A.



ISSUE
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SFD-10-01-M306

SEQUENCE CHART
INCOMING TRUNK IN DISTANT
OFFICE CLASS OF TRUNK TEST (ITDO)

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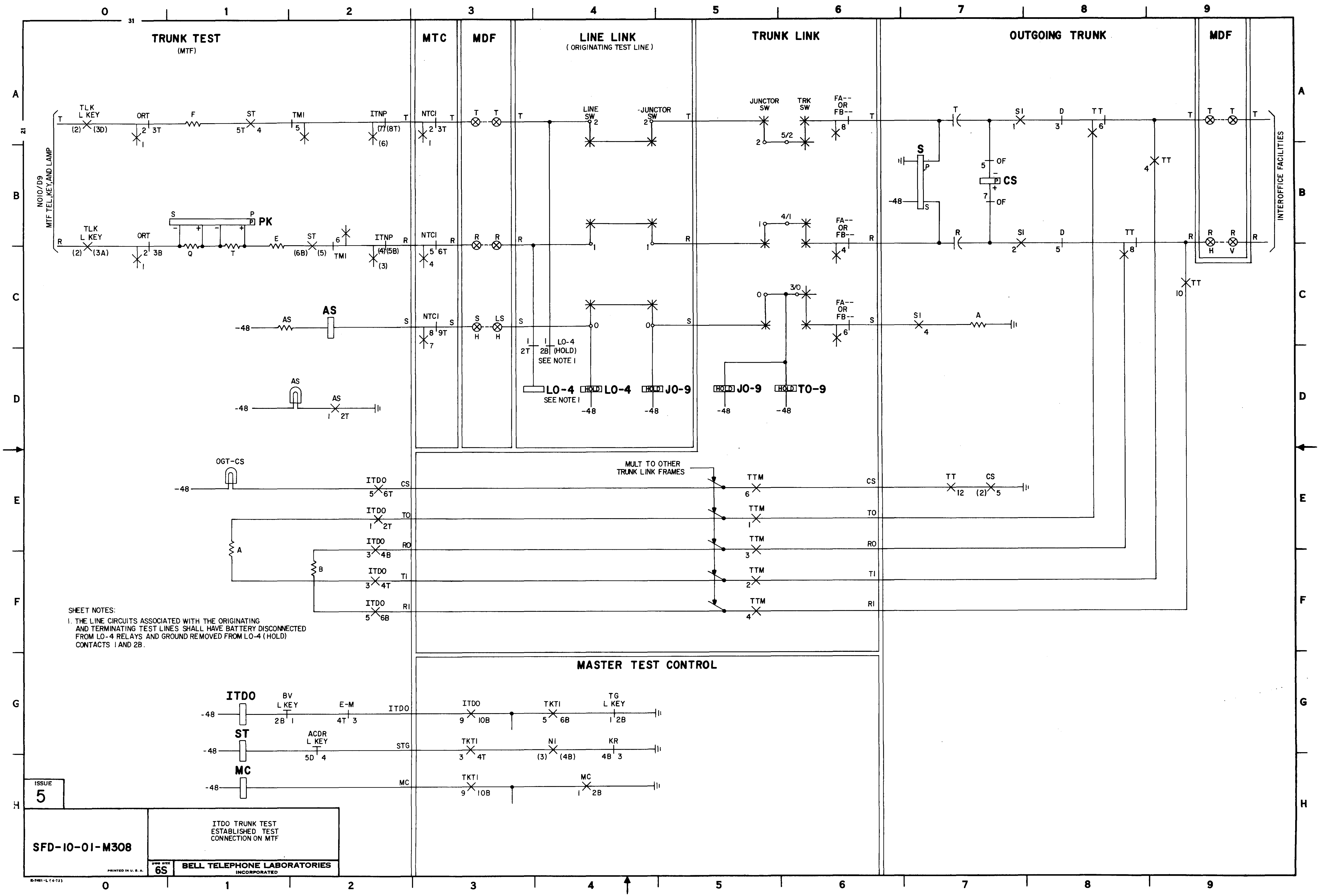
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-M306



SHEET NOTES:

1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING AND TERMINATING TEST LINES SHALL HAVE BATTERY DISCONNECTED FROM LO-4 RELAYS AND GROUND REMOVED FROM LO-4 (HOLD) CONTACTS 1 AND 2B.

ISSUE
5

SFD-10-01-M308

ITDO TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

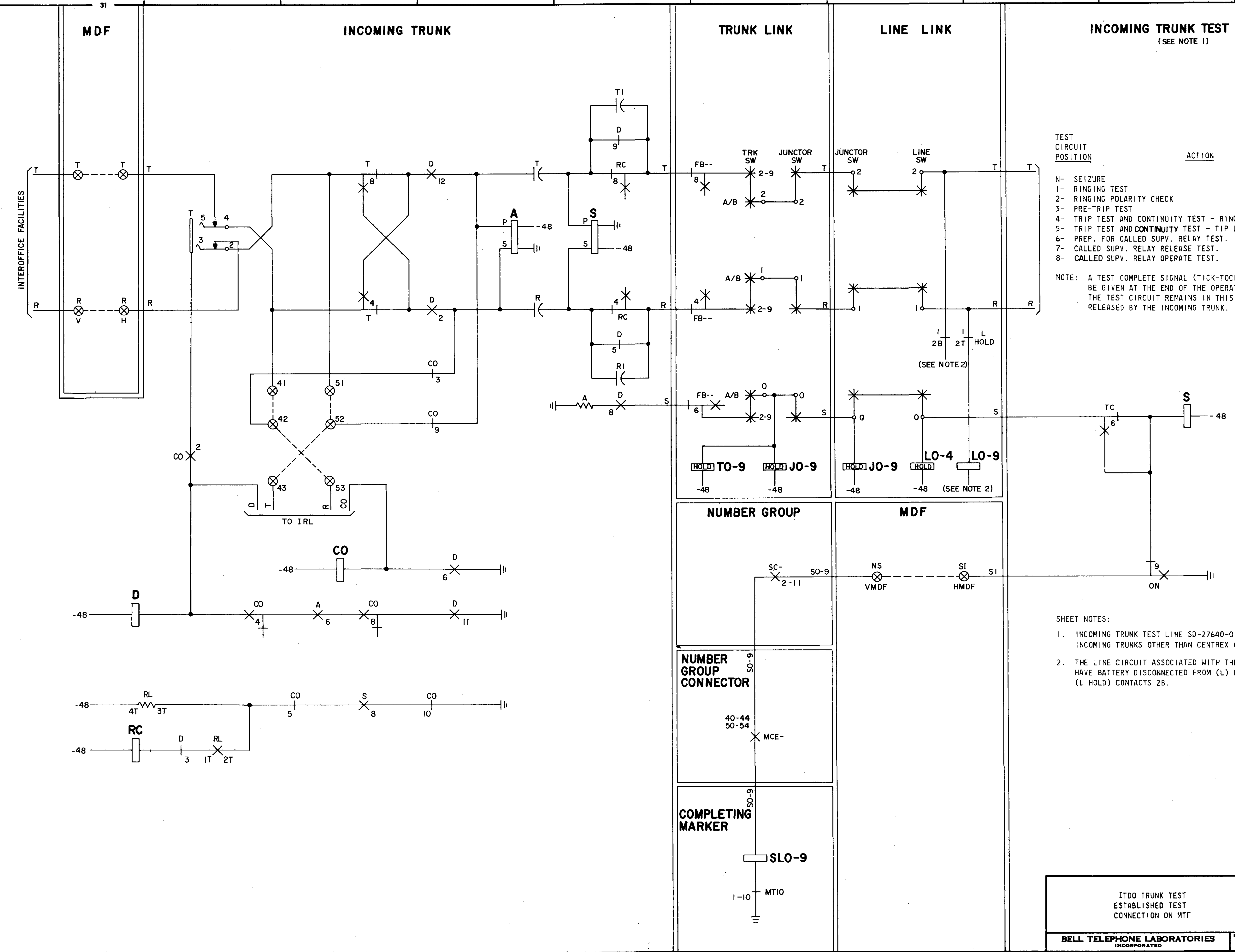
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7421-L (4-73)

SFD-10-01-M308



TEST CIRCUIT POSITION	ACTION
N-	SEIZURE
1-	RINGING TEST
2-	RINGING POLARITY CHECK
3-	PRE-TRIP TEST
4-	TRIP TEST AND CONTINUITY TEST - RING LEAD
5-	TRIP TEST AND CONTINUITY TEST - TIP LEAD
6-	PREP. FOR CALLED SUPV. RELAY TEST.
7-	CALLED SUPV. RELAY RELEASE TEST.
8-	CALLED SUPV. RELAY OPERATE TEST.

NOTE: A TEST COMPLETE SIGNAL (TICK-TOCK TONE) WILL BE GIVEN AT THE END OF THE OPERATE TEST. THE TEST CIRCUIT REMAINS IN THIS POSITION UNTIL RELEASED BY THE INCOMING TRUNK.

SHEET NOTES:

1. INCOMING TRUNK TEST LINE SD-27640-01 (APP FIG. 1,2 & Z) FOR TESTING INCOMING TRUNKS OTHER THAN CENTREX OR WADS.
2. THE LINE CIRCUIT ASSOCIATED WITH THE INCOMING TRUNK TEST LINE SHALL HAVE BATTERY DISCONNECTED FROM (L) RELAY AND GROUND REMOVED FROM (L HOLD) CONTACTS 2B.

ISSUE
5

ITDO TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

SFD-10-01-M309

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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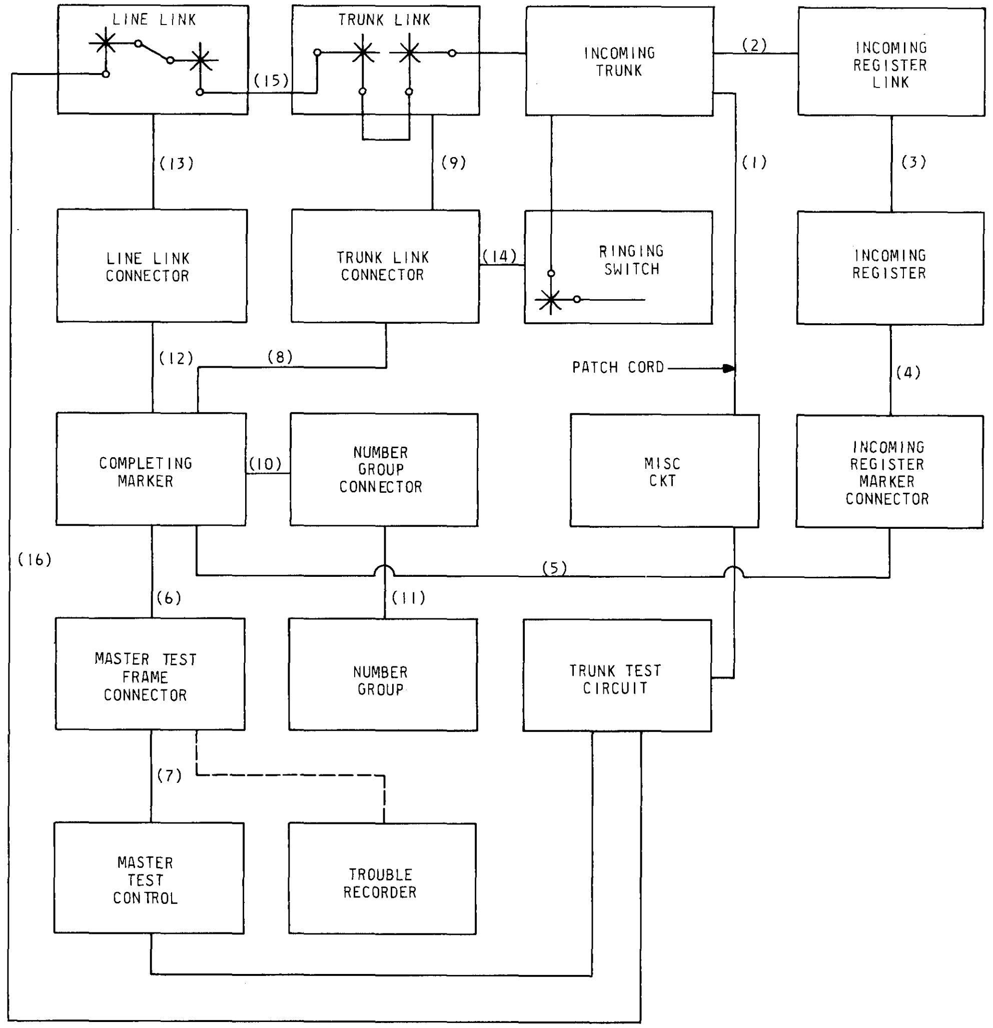
INCOMING TRUNK NO PULSING CLASS OF TRUNK TEST (ITNP)



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M405	SEQUENCE CHART - ITNP CLASS OF TRUNK TEST
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M410	RINGING SWITCH CONNECTION - INCOMING CALL

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
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PART M4
INCOMING TRUNK
TEST - NO PULSING (ITNP)

SFD-10-01-M401

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U.S.A.

INCOMING TRUNK CIRCUITS
TESTS USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR
1	TRUNK SEIZURE	218-251-501	A
2	RINGING	218-251-501	B
3	PRETRIP AND TRIP	218-251-501	C
4	SUPERVISION-ORIG.AND TERM.ENDS DISCONNECT	218-251-501	D
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7	LINE BUSY	218-251-501	G
8	OVERFLOW	218-251-501	H
9	FREE CALL	218-251-501	I

BSP-218-251-501, ISS 9

SD-25800-01 MASTER TEST CONTROL CIRCUIT(MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-D902/D904/D906).
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.
4. SELECT DIGITS AS REQUIRED FOR LOCAL COMPLETION TO PERMANENT OVERFLOW OR FREE TERMINATING TEST LINE.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	68, ZO	ITNP KEY	INCOMING TRUNK NO PULSING CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT WHICH HAS BEEN PREVIOUSLY PATCHED TO THE INCOMING TRUNK TO BE TESTED.
	74	TSTB SW (ITNP)	
1	4	TTL KEY	TERMINATING TEST LINE OPERATED ON A TRUNK TEST TO TRANSMIT THE D-G DIGITS OF THE TERMINATING TEST LINE TO THE MARKER.
1,2	7,RB	RC (1-15) KEY	RINGING COMBINATION CONTROLS THE RINGING COMBINATION SET UP BY THE MARKER ON THE RINGING SELECTION SWITCH.
	7,RC	RC (1-10) KEY	
		OTRC KEY	
	7,JF	RCU SW (1-10)	
	7,ZYH ZV1	RCT 1 KEY	
1		LS KEY	LOW RESISTANCE SLEEVE OPERATED PLACES A LOW RESISTANCE RELAY ON THE SLEEVE TO THE TRUNK TO DETECT WHEN AN INCOMING REGISTER IS CONNECTED AND TO INFORM THE REGISTER THAT A TEST CALL IS IN PROGRESS.
		HS KEY	HIGH RESISTANCE SLEEVE OPERATED PLACES A HIGH RESISTANCE RELAY ON THE SLEEVE TO THE TRUNK TO DETECT WHEN AN INCOMING REGISTER IS CONNECTED.(KEYS LOC ON TRUNK TEST PANEL)
1		SLP KEY	SHORT LOOP CONNECTS LOOP OF 3116 OHMS(INCLUDING CS RELAY) TO THE A RELAY OF THE TRUNK CIRCUIT.
		LLP KEY	LONG LOOP CONNECTS LOOP OF 6205.6 OHMS (INCLUDING CS RELAY) TO THE A RELAY OF THE TRUNK CIRCUIT.
		SXS KEY	STEP-BY-STEP OPERATED WHEN TESTING INCOMING TRUNKS FROM A STEP-BY-STEP OFFICE. LOOP OF 2560 OHMS KEYS LOC ON TRUNK TEST PANEL.
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT. KEY LOC ON TRUNK TEST PANEL
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
3		ANS KEY	ANSWER KEY OPERATES(ANS) RELAY WHICH SUPPLIES TERMINATING RESISTANCE TO THE CALLED SUPERVISORY RELAY OF INCOMING TRUNK CIRCUIT. AT THE SAME TIME RELAY(LK) CHECKS THE CONTINUITY OF THE LOOP AND CONNECTS HIGH TONE BACK THRU THE TRUNK CIRCUIT. KEY LOC ON TRUNK TEST PANEL
3	1	REC KEY	RECORD CAUSES MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING.
		TRP KEY	TRIP APPLIES A TRIP TEST TO THE PT RELAY IN THE INCOMING TRUNK. KEY LOC ON TRUNK TEST PANEL

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
3		PTP KEY	PRETRIP APPLIES A PRETRIP TEST TO THE RT RELAY IN THE INCOMING TRUNK. KEY LOC ON TRUNK TEST PANEL
3	4, KX	A-E (0-9) KEY	DIGITS DIRECTORY NUMBER OF LINE BEING TESTED WHEN KY KEY IS OPERATED.
	4, ZVL	A-E (0-9) SW	SEE NOTE 4
3	4	KY KEY	CONNECT NUMBER ALLOWS ANY NUMBER OF KEYS OR SWITCHES A (0-9) THRU E (0-9) TO BE TRANSMITTED TO THE MARKER.
3	4	BB KEY	BUSYBACK CAUSES A PERMANENTLY BUSY NUMBER TO BE TRANSMITTED TO THE MARKER.

ISSUE
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SFD-10-01-M402

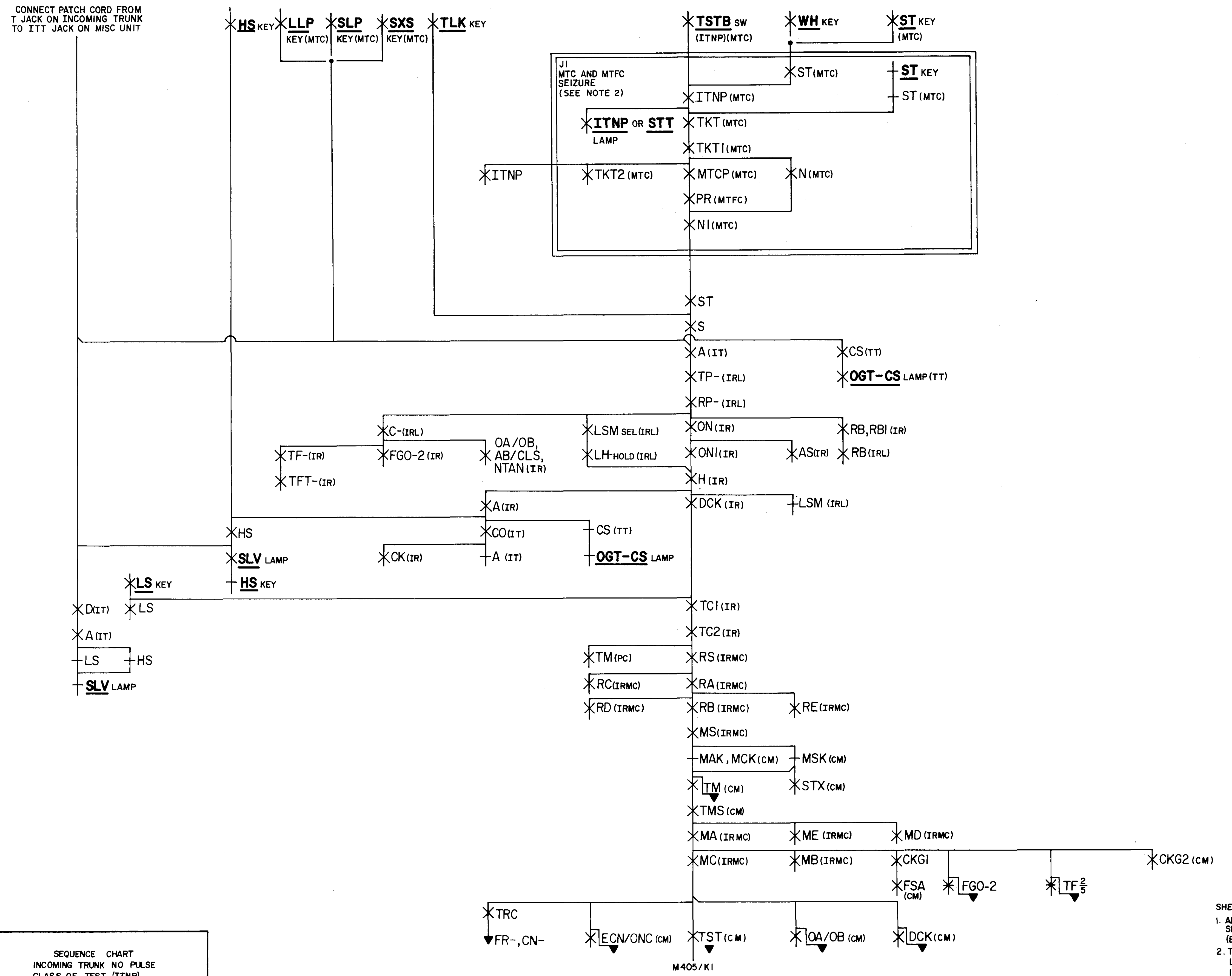
TEST FRAME SET-UP
INCOMING TRUNK TEST-NO PULSING (ITNP)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.
E-7421-L (4-73)

INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITNP)



SHEET NOTES:

1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD-27718-01)
2. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE INCOMING TRUNK NO PULSE TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE
5

SFD-10-01-M404

SEQUENCE CHART
INCOMING TRUNK NO PULSE
CLASS OF TEST (ITNP)

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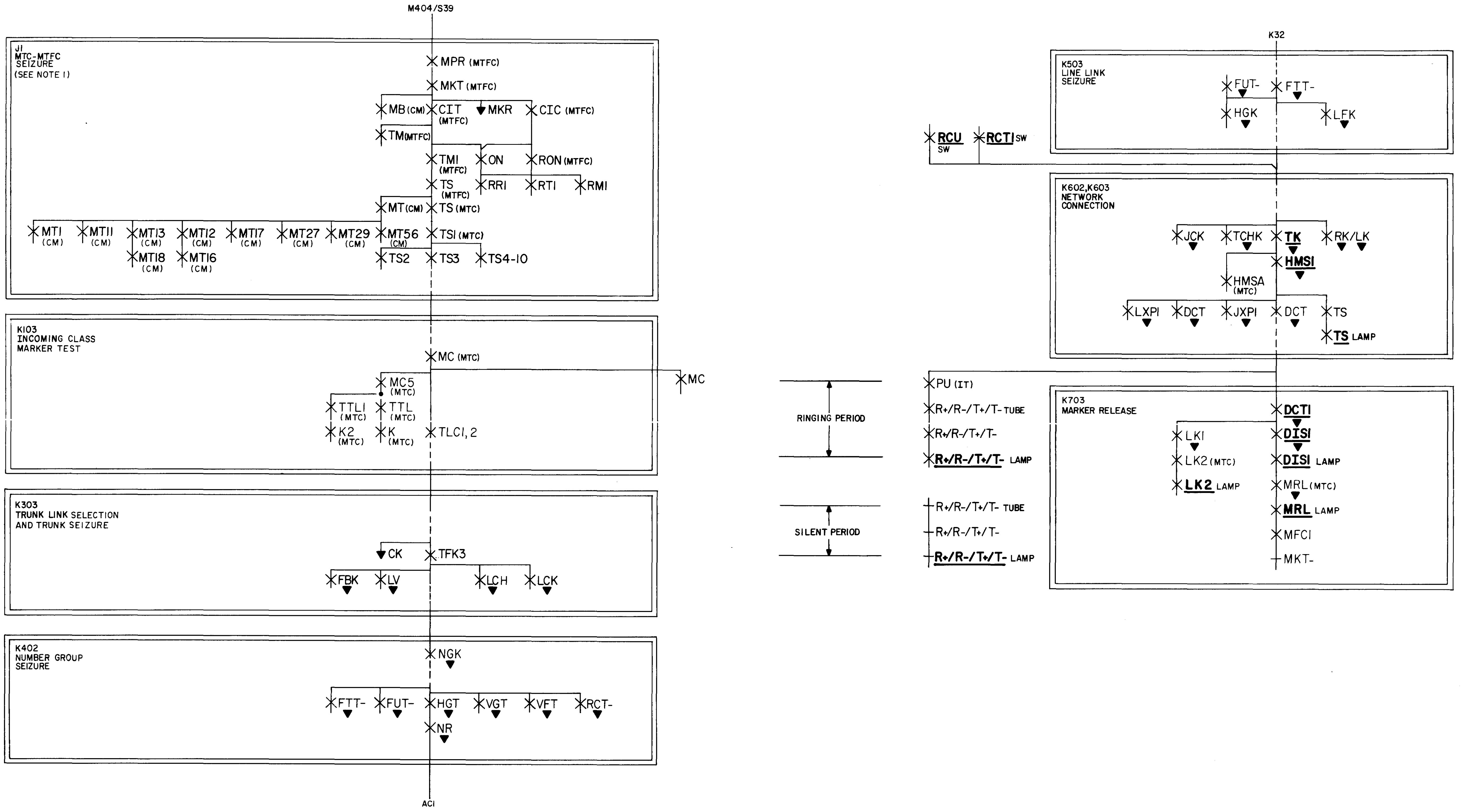
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-72)

SFD-10-01-M404



SHEET NOTES:

1. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE INCOMING TRUNK NO-PULSING TEST. THE CIRCUIT PATHS FOR APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

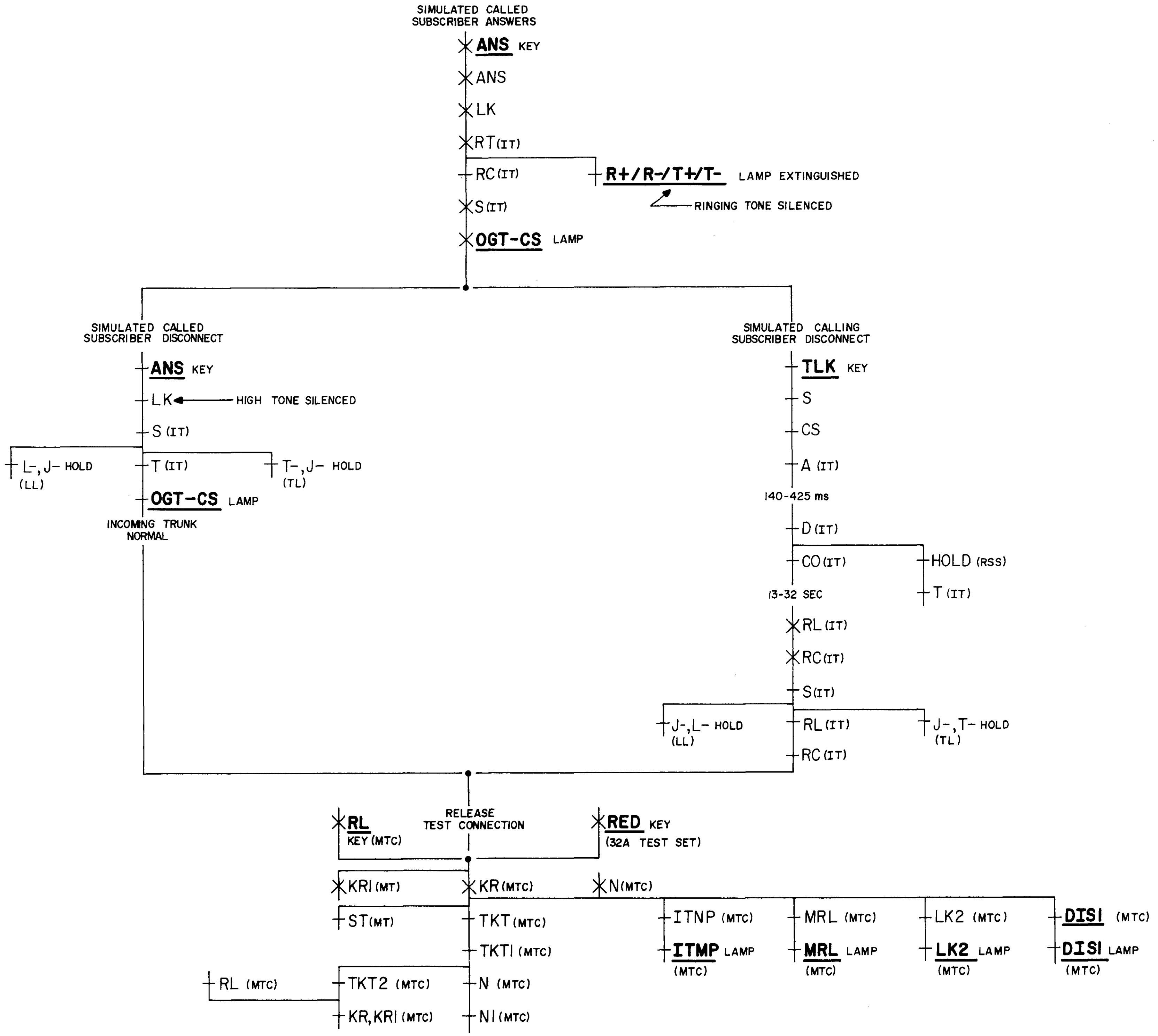
SEQUENCE CHART
INCOMING TRUNK NO PULSE
CLASS OF TEST (ITNP)

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M405

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



ISSUE
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SFD-10-01-M406

SEQUENCE CHART
INCOMING TRUNK NO-PULSING
(ITNP)

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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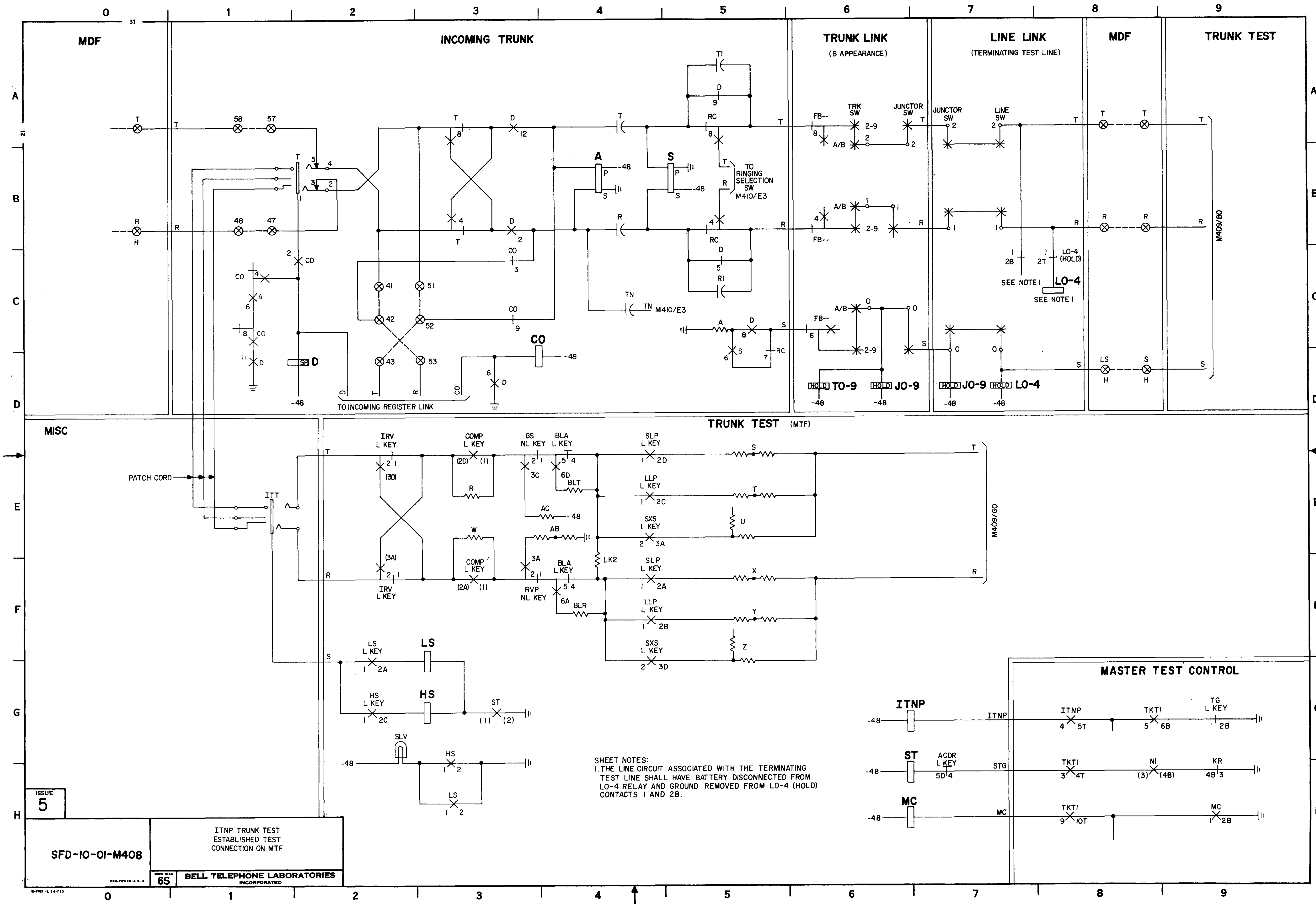
E-7481-L (4-73)



SHEET NOTES:

1. THE LINE CIRCUIT ASSOCIATED WITH THE TERMINATING TEST LINE SHALL HAVE BATTERY DISCONNECTED FROM LO-4 RELAY AND GROUND REMOVED FROM LO-4 (HOLD) CONTACTS 1 AND 2B.

ISSUE 5

SFD-10-01-M408

ITNP TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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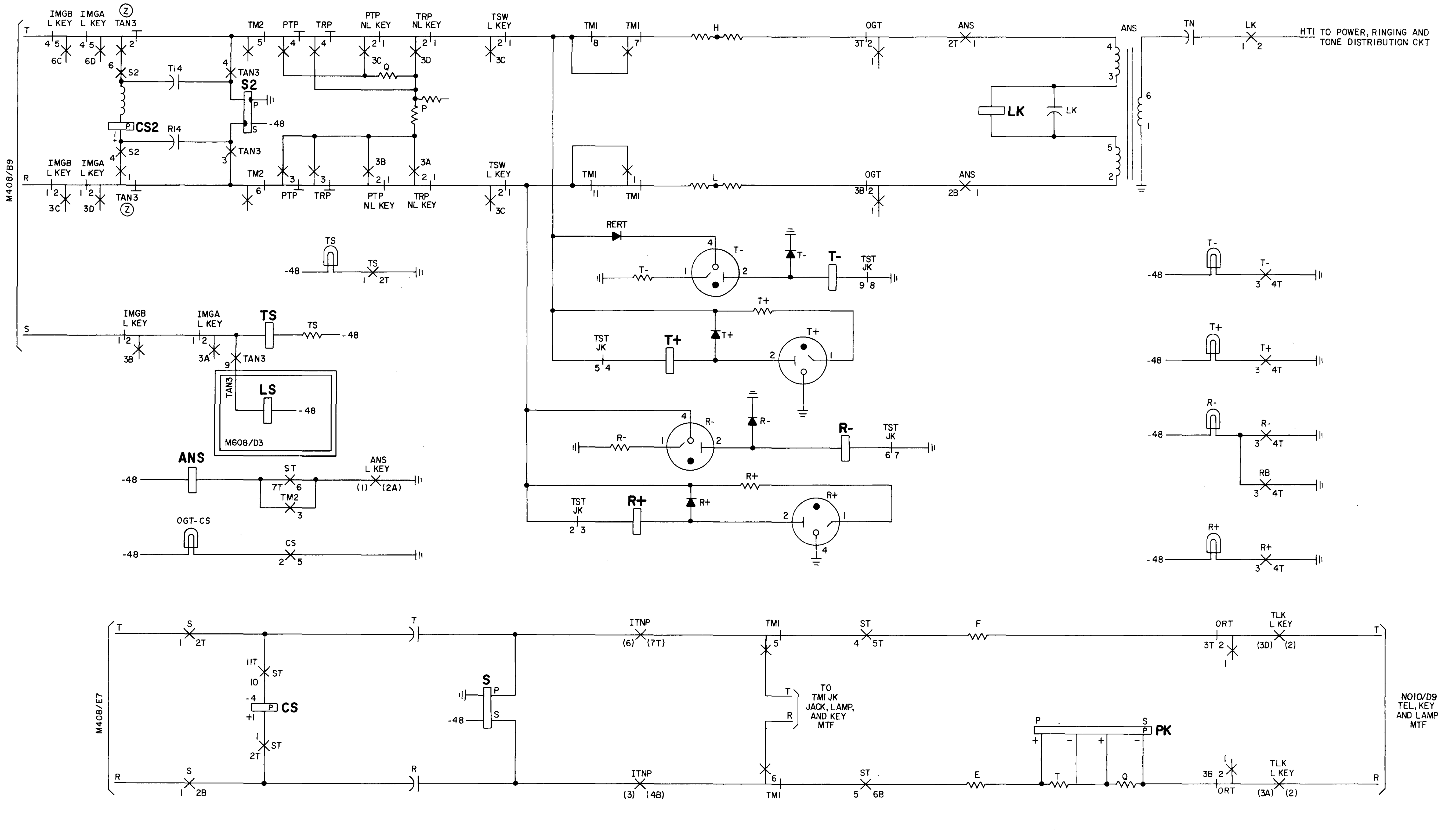
E-7481-L (4-73)

SFD-10-01-M408

TRUNK TEST (MTF)



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓩ LOOP AROUND TRANSMISSION TESTING OF 2W TANDEM TRUNK.

ISSUE
5

ITNP TRUNK TEST
ESTABLISHED TEST
CONNECTION ON MTF

SFD-10-01-M409

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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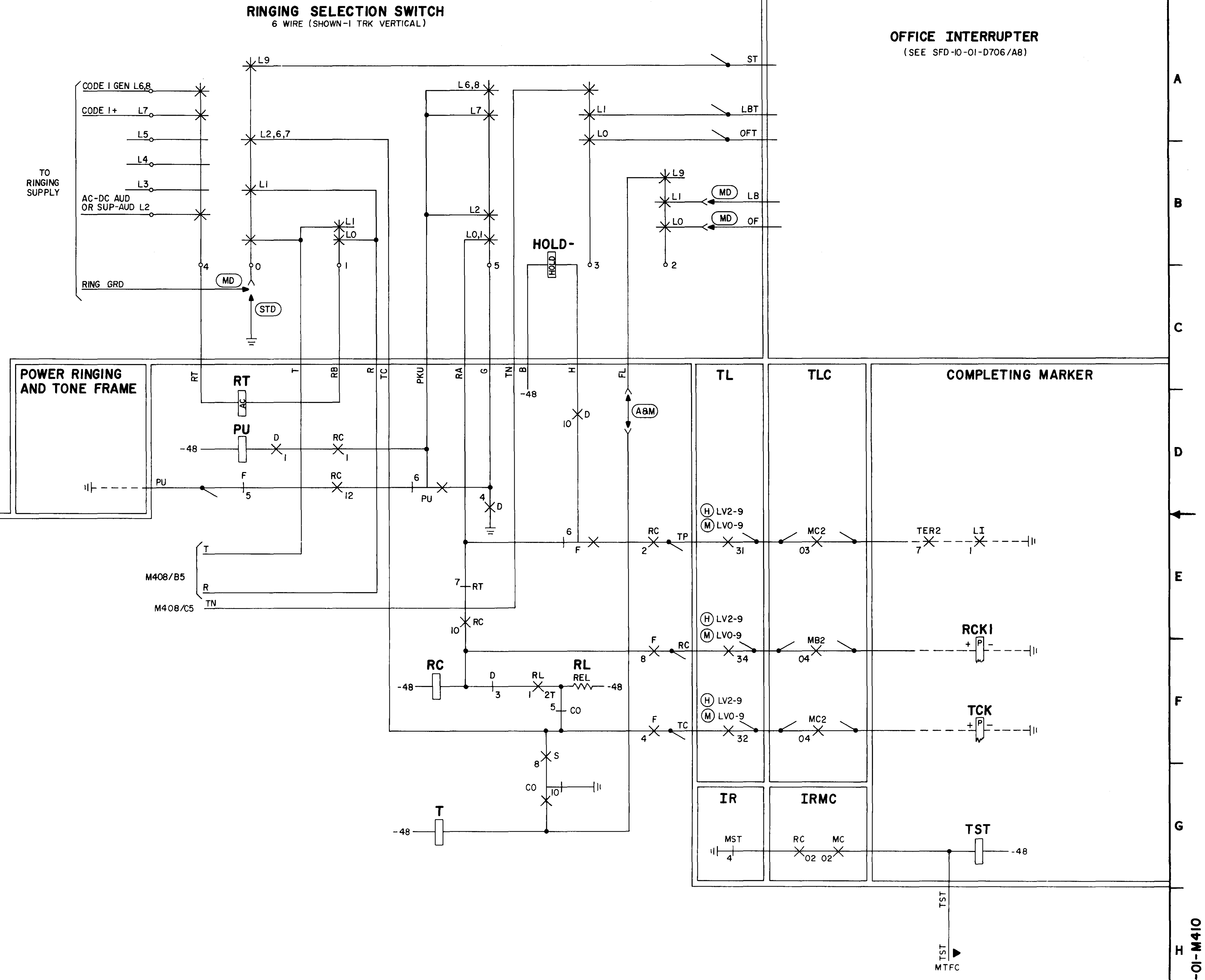
PARTY	RINGING COMBINATION (6-WIRE SW)	RS (SEL SW)	RINGING CURRENT TO TRUNK LEADS		TRANSMITTED TO CALLING SUBSCRIBER
			T	R	
1	1	0,6	RING GRD	CODE 1 GEN	AUD RING
PBX	10				
2	11	1,6	CODE 1 GEN	RING GRD	
3	6	0,7	RING GRD	CODE 1+	
4	7	1,7	CODE 11	RING GRD	
BUSY		1,9			60 IPM LOW TONE
OVERFLOW		0,9			120 IPM LOW TONE
REG INTERCEPT		0,2	RING GRD	AC-DC AUD OR SUP-AUD	AUD RING
TRL INTERCEPT		1, 2	AC-DC AUD OR SUP-AUD	RING GRD	



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓗ TRUNK LINK FRAME; SD-26032-01
Ⓜ TRUNK LINK FRAME; SD-27879-01

ISSUE
5

SFD-10-01-M410

RINGING SWITCH CONNECTION
INCOMING CALL

PRINTED IN U.S.A.

DWG SIZE
6S

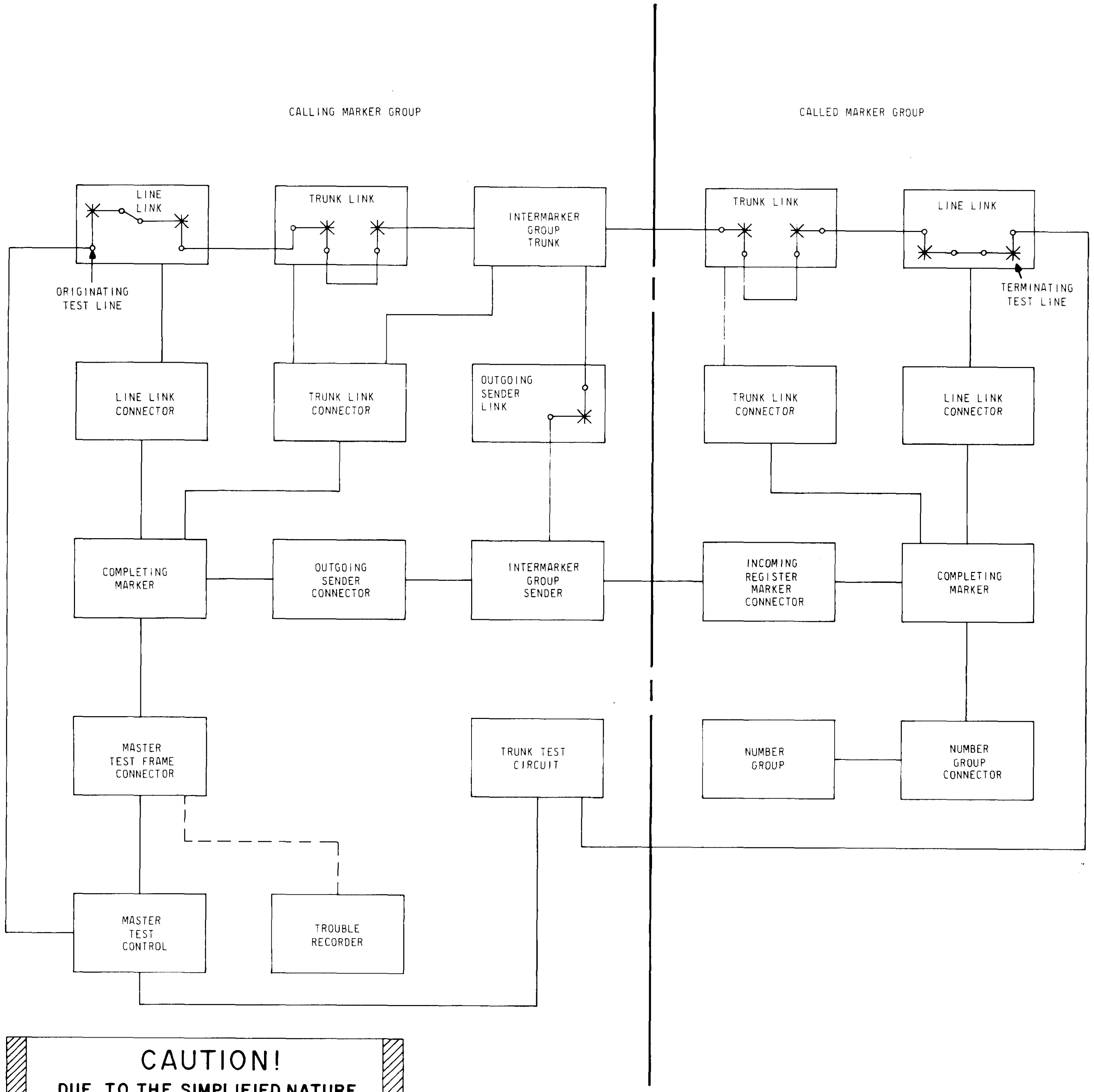
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-M410

INTERMARKER GROUP TRUNK - SUB TO SUB

(IAO CLASS OF TRUNK)



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M505	SEQUENCE CHART - INTERMARKER GROUP TRUNK TEST - IAO CLASS OF TEST
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CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

PART M5
INTERMARKER GROUP TRUNK TEST
IAO CLASS OF TEST

DWG SIZE	ISSUE	
6S	5	
BELL LABORATORIES	SFD-10-01-	M501

E-7421 (6-75) PRINTED IN U.S.A.

INTERMARKER GROUP TRUNK CIRCUITS
TEST USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	BSP	PAR
1	TRUNK SEIZURE AND RELEASE	218-249-502	A
2	RINGING FEATURES	218-249-502	B
3	TRIP AND PRETRIP	218-249-502	C
4	SUPERVISION - ORIG AND TER ENDS DISCONNECT	218-249-502	D
5	SUPERVISION - ORIGINATING END DISCONNECT	218-249-502	E
6	SUPERVISION - TERMINATING END DISCONNECT	218-249-502	F
7	NON CHARGE SUPERVISION	218-249-502	G
8	TRUNK BUSY	218-249-502	O
9	FALSE BUSY - FALSE IDLE CONDITIONS	218-249-502	D

BSP 218-249-502, ISS 3

SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD SFD-F702, F704,F706.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	6B	IAO KEY	INTRAOFFICE CLASS OF TRUNK TEST CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT AND THEN TO A MARKER THROUGH THE MASTER TEST FRAME CONNECTOR CIRCUIT IN ORDER TO DIRECT THE MARKER TO SET UP A TEST CONNECTION TO THE INTERMARKER GROUP TRUNK UNDER TEST.
	74	TSTB SW (IAO)	
1,2	7,WX	FACD KEY (N-OPR)	ORIGINATING CLASS WITH THE FACD KEY NORMAL OR THE CL SWITCH OPERATED TO OR-DP/MF, INDICATES A HOME AREA CODE.
	11,NQ	CL SW (OR-DP/MF)	
	WW	NONE	
1,2	NT,QW	LOCAL TRNSL (ALL KEYS NORMAL)	TRANSLATOR CLASS OPERATE AS REQUIRED TO PRIME MARKER FOR LOCAL TRANSLATION.
	11,NQ	TRNA SW (LT)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT SW (0-11)	
	81	MTU SW (0-9)	
		MTTI KEY	
1	4,KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH THE THREE DIGIT INTERMARKER GROUP OFFICE CODE.
	4,ZVL	A-C SW (0-9)	
1	4	TTL KEY	TERMINATING TEST LINE OPERATED ON A TRUNK TEST TO TRANSMIT THE D-G DIGITS OF THE TERMINATING TEST LINE TO THE MARKER.
1,2	7,XA, XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH, RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37, GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED.
1,2	7,ED	CSGA/ CSGB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED.
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT. TLK KEY LOC ON TRUNK TEST PANEL.
1		IMGA/ IMGB KEY	INTERMARKER GROUP A OR B OPERATE DEPENDING UPON WHICH MARKER GROUP THE TERMINATING SIDE OF THE INTERMARKER GROUP TRUNK APPEARS. KEY LOC ON TRUNK TEST PANEL.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.

SD-25800-01

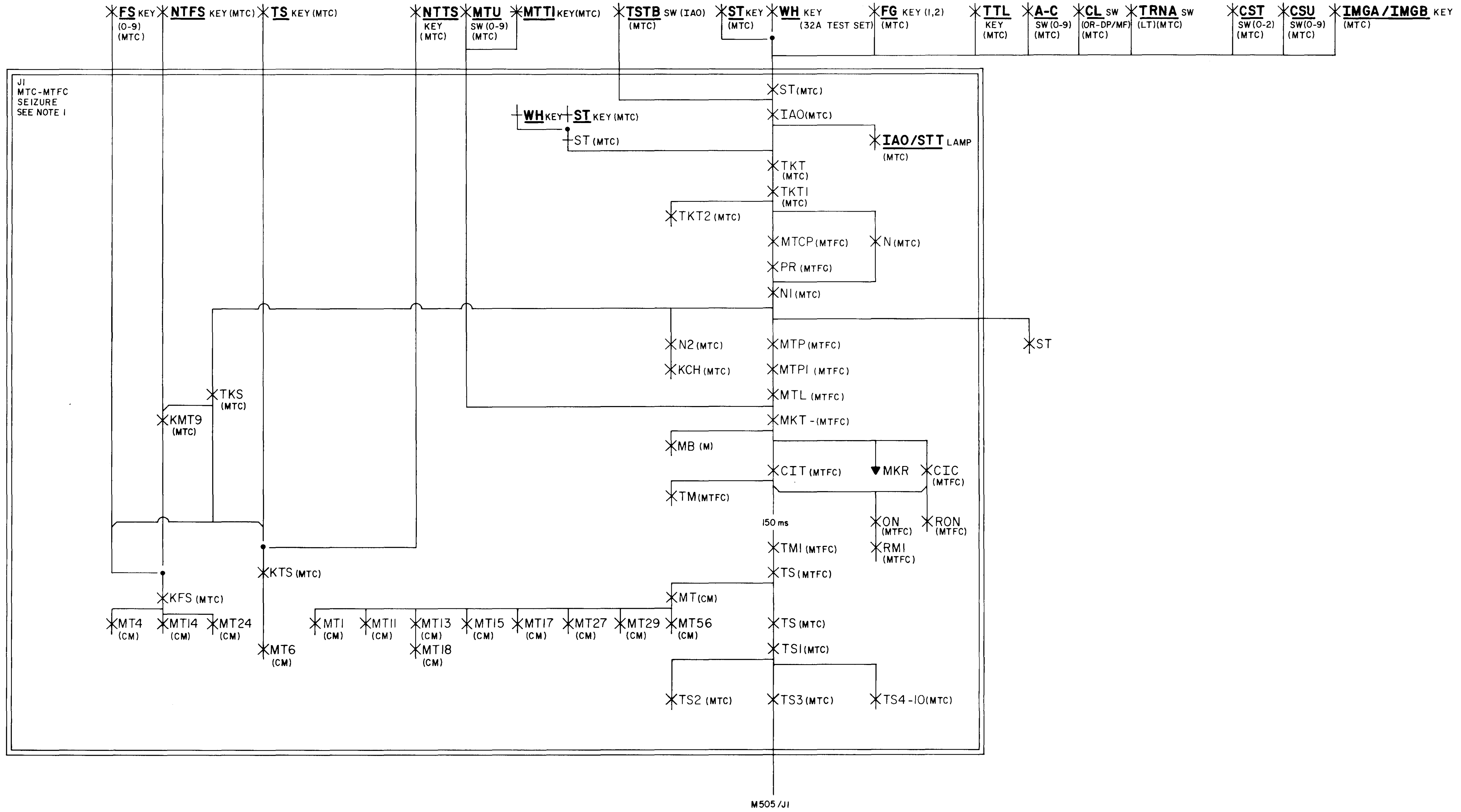
*SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
2	9,QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9,QF	RA SW (0-5)	
	9,IB	RA SW (0-11)	
	9,CG	RAU SW (0-9)	
	9/99 DL	RATI KEY	
2	9	GPA/ GPB KEY	ALLOTTER GROUP A AND B USED ON TEST REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
3		ANS KEY	ANSWER WHEN OPERATED TO ANSWER EXTENDS THE TIP AND RING LEADS TOWARD A TERMINATING TEST LINE CONSISTING OF RESISTORS AND RELAYS SIMULATING AN INCOMING TRUNK CIRCUIT. THE RESISTANCE IN THIS LOOP GIVES AN OPERATE TEST TO CALLED PARTY SUPERVISORY RELAY OF THE TRUNK CIRCUITS. ANS KEY LOC ON TTC PANEL.
2	9	FS/ NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEY OR SWITCH. WITH FS KEY OR WITHOUT NTFS KEY, FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS(0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
	79	FG (0-2) KEY	
	80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
2	U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) ON FG(0-2) KEYS LOOK BUSY.
	80	FS SW (0-9)	
2	9	TS/ NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0-19) KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED, WILL OPERATE THE TST RELAY IN THE TLF WHICH REMOVES THE PLUGGED-BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME.
2	9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-9) KEY LOOK BUSY TO THE MARKER.
	9,JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS TS(0-19) KEY.
		TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.
3		PTP KEY	PRETRIP APPLIES A PRETRIP TEST TO THE RT RELAY IN THE IMG TRUNK. KEY LOC ON TRUNK TEST PANEL
3		TRP KEY	TRIP APPLIES A TRIP TEST TO THE RT RELAY IN THE IMG TRUNK. KEY LOC ON TRUNK TEST PANEL

ISSUE	DWG SIZE	TEST FRAME SET UP INTERMARKER GROUP TRUNK TEST
5	6S	

SFD-10-01- M502 BELL LABORATORIES

INTERMARKER GROUP TRUNK

(SUB-SUB) (IAO CLASS OF TEST)



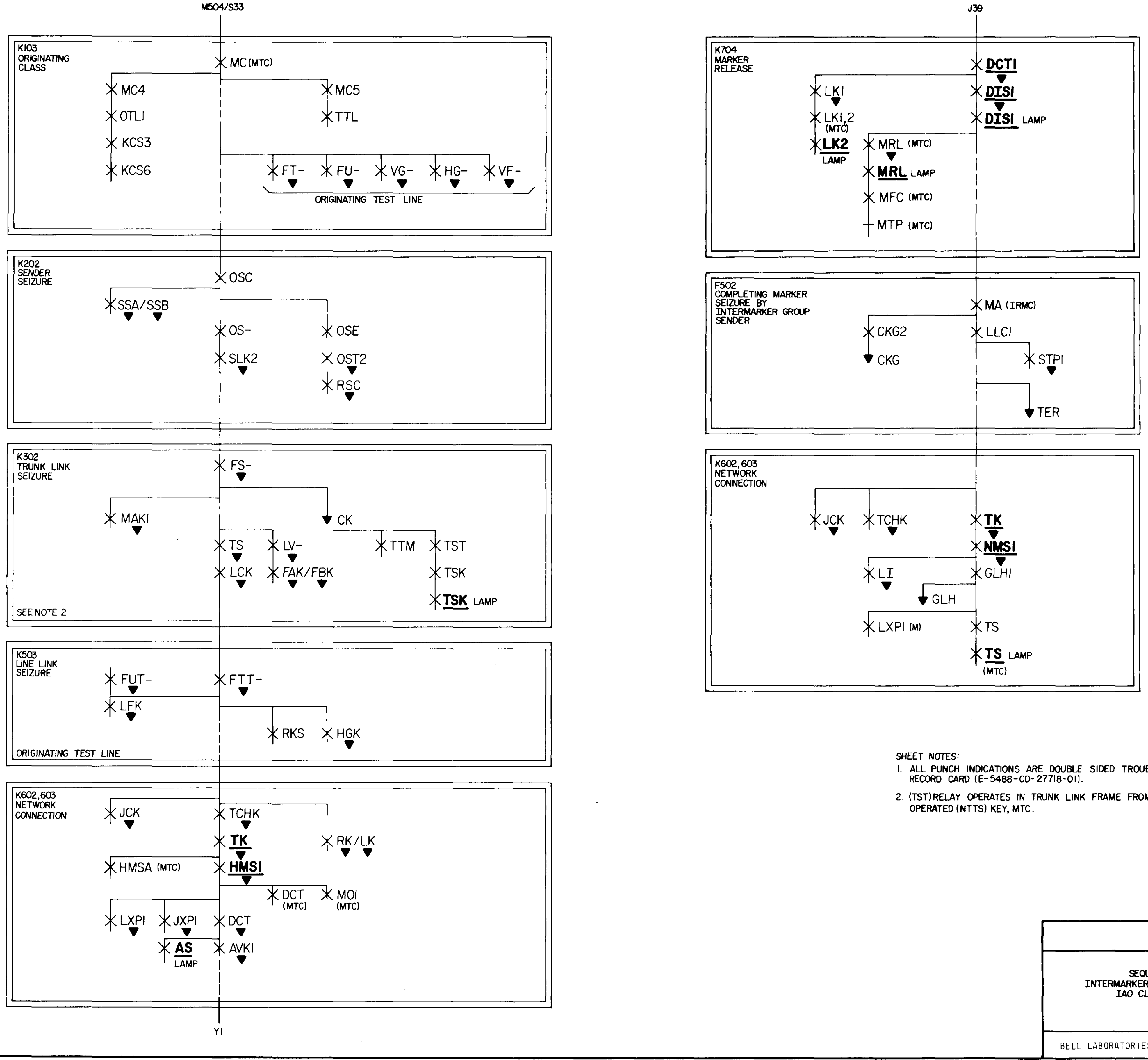
SHEET NOTES:

1. THE SEQUENCE CHART SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE INTERMARKER GROUP TRUNK TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE	DWG SIZE	
5	6S	SEQUENCE CHART INTERMARKER GROUP TRUNK TEST IAO CLASS OF TEST

SFD-10-01- M504 BELL LABORATORIES

SFD-10-01-M504



SHEET NOTES:

1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD-27718-01).
2. (TST) RELAY OPERATES IN TRUNK LINK FRAME FROM OPERATED (NTTS) KEY, MTC.

SEQUENCE CHART
INTERMARKER GROUP TRUNK TEST
IAO CLASS OF TEST

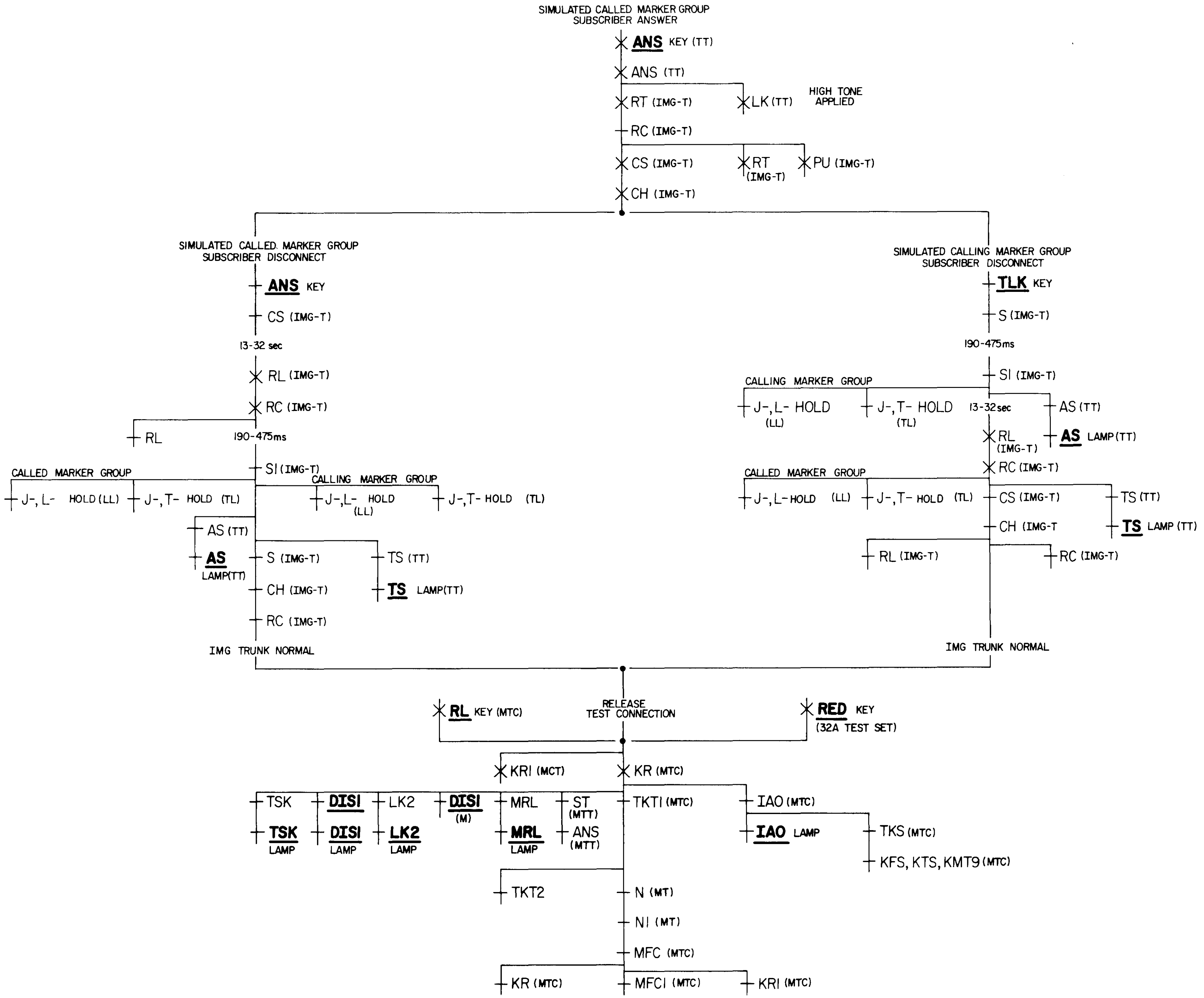
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M505

SFD-10-01-M505

BRUNING 44-131 28142

E-7421-8(6-75) PRINTED IN U.S.A.



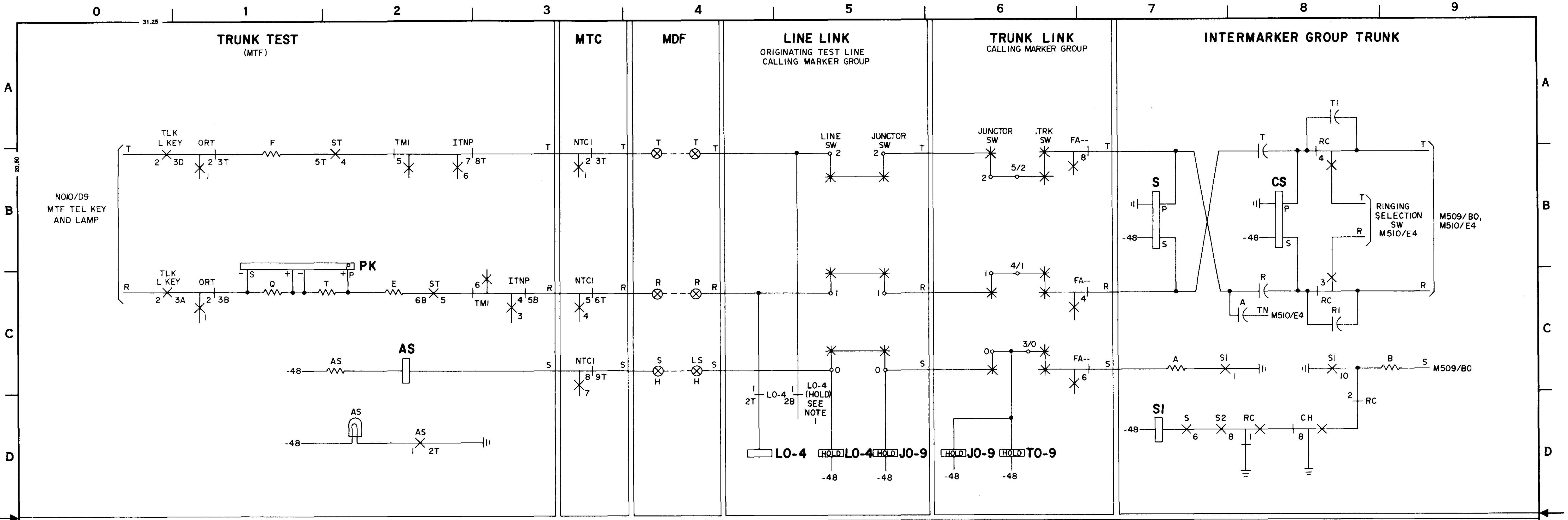
SEQUENCE CHART
INTERMARKER GROUP TRUNK TEST
IAO CLASS OF TEST

ISSUE	DWG SIZE
5	6S

SFD-10-01- M506 BELL LABORATORIES

ING 44-131 28142

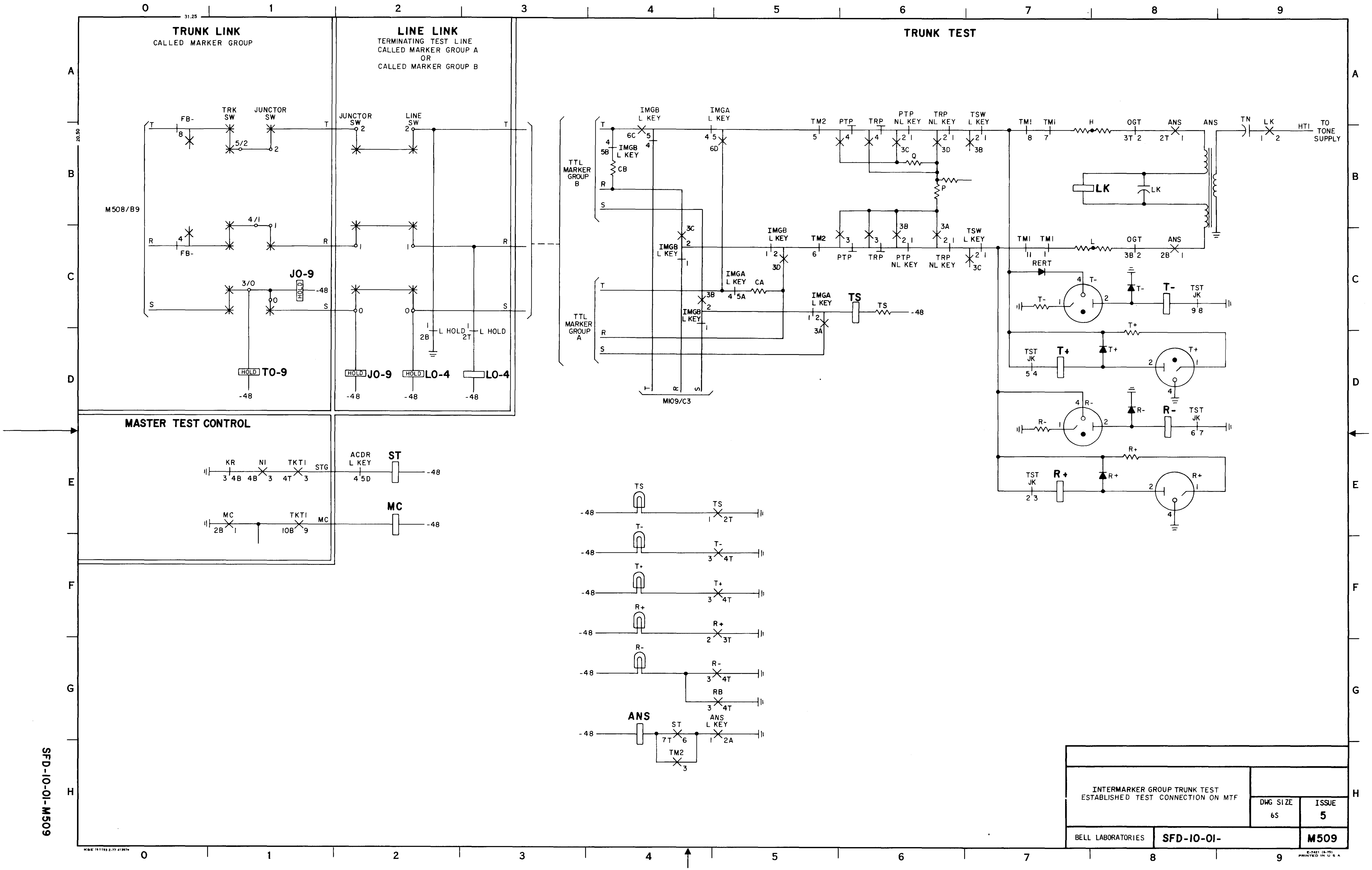
E-7481-8 (6-75) PRINTED IN U.S.A.



SHEET NOTES:

1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING AND TERMINATING TEST LINES SHALL HAVE BATTERY DISCONNECTED FROM (LO-4) RELAYS AND GROUND REMOVED FROM LO-4 (HOLD) CONTACTS 1 AND 2B.

ISSUE 5	DWG SIZE 6S	IMG TRUNK TEST ESTABLISHED TEST CONNECTION ON MTF
SFD-10-01-	M508	BELL LABORATORIES



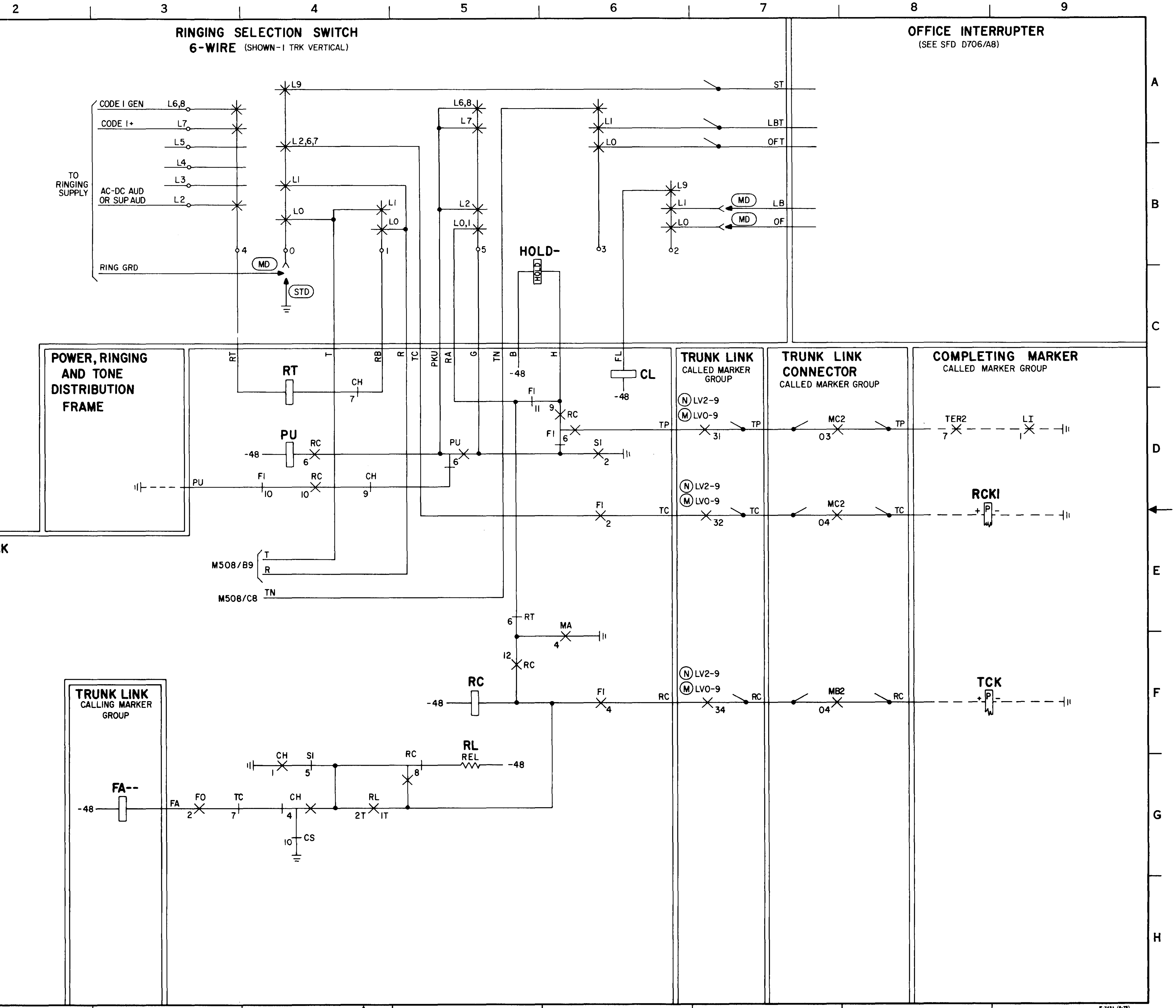
INTERMARKER GROUP TRUNK TEST
ESTABLISHED TEST CONNECTION ON MTF

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M509

SFD-10-01-M509

PARTY	RINGING COMBINATION 6 WIRE SW	RS SEL SW	RINGING CURRENT TO TRUNK LEADS		TRANSMITTED TO CALLING SUBSCRIBER
			T	R	
1	1	0,6	RING GRD	CODE I GEN	AUD RING
PBX	10				
2	11	1,6	CODE I GEN	RING GRD	
3	6	0,7	RING GRD	CODE I+	
4	7	1,7	CODE II	RING GRD	
BUSY		1,9			60 IPM
OVERFLOW		0,9			120 IPM
REG INTERCEPT		0,2	RING GRD	AC-DC AUD/SUP AUD	AUD RING
TRL INTERCEPT		1,2	AC-DC AUD/SUP AUD	RING GRD	



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓜ TRUNK LINK FRAME - SD-27879-01
Ⓝ TRUNK LINK FRAME - SD-26032-01

RINGING SWITCH CONNECTION
INTERMARKER GROUP (IMG) CALL

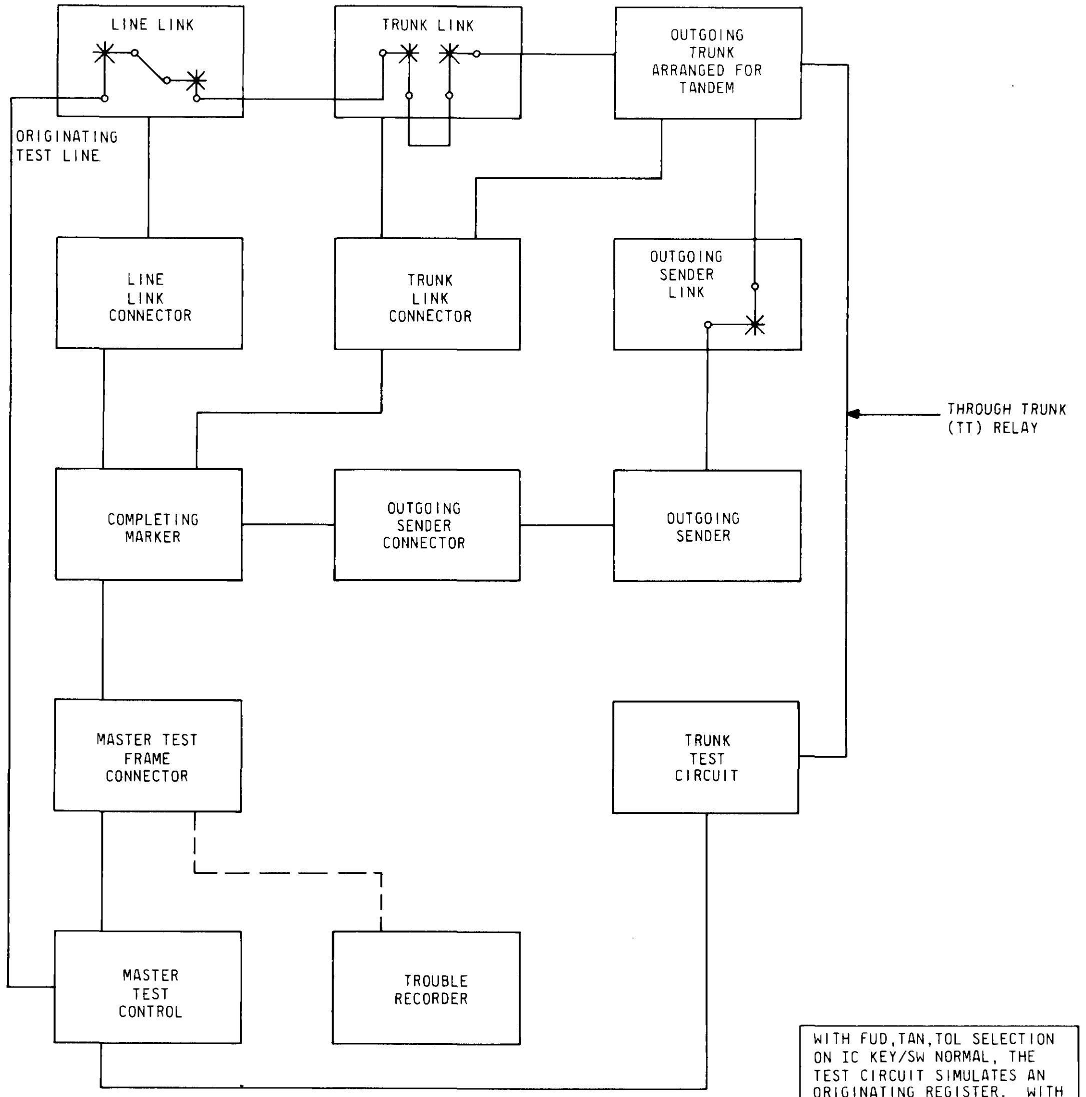
ISSUE	DWG SIZE
5	6S

SFD-10-01- M510 BELL LABORATORIES

SFD-10-01-M510

OUTGOING CLASS OF TRUNK TEST

(OUTGOING TRUNK ARRANGED FOR TANDEM)



WITH FUD,TAN,TOL SELECTION ON IC KEY/SW NORMAL, THE TEST CIRCUIT SIMULATES AN ORIGINATING REGISTER. WITH FUD, TAN, TOL SELECTION ON IC KEY/SW THE TEST CIRCUIT SIMULATES AN INCOMING REGISTER CONNECTED TO A TANDEM INCOMING TRUNK.

PAGE NO	TITLE
M601	PART M6 - OUTGOING TRUNK (TANDEM) TRUNK TEST - OUTGOING TRUNK CLASS OF TRUNK TEST
M602	TEST FRAME SET UP - OUTGOING TRUNK (TANDEM) CLASS OF TEST
M603	TEST FRAME SET UP - OUTGOING TRUNK (TANDEM) CLASS OF TEST
M604	SEQUENCE CHART - OUTGOING TRUNK (TANDEM) CLASS OF TEST
M605	SEQUENCE CHART - OUTGOING TRUNK (TANDEM) CLASS OF TEST
M606	RESERVED
M607	SEQUENCE CHART - OUTGOING TRUNK (TANDEM) CLASS OF TEST
M608	OUTGOING TRUNK (TANDEM) CLASS OF TRUNK TEST - ESTABLISHED TEST CONNECTION ON MTF
M609	OUTGOING TRUNK (TANDEM) CLASS OF TRUNK TEST - ESTABLISHED TEST CONNECTION ON MTF

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

PART M6
OUTGOING TRUNK (TANDEM) TRUNK TEST
OUTGOING TRUNK CLASS OF TRUNK TEST

DWG SIZE	ISSUE	
6S	5	
BELL LABORATORIES	SFD-10-01-	M601

E-7421 (6-75)
PRINTED IN U S A

OUTGOING TRUNK CIRCUITS
TESTS USING TRUNK TEST CIRCUIT SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	BSP	PAR
1	SEIZURE	218-271-501	J
2	OVERFLOW	218-271-501	K

BSP 218-271-501, ISS 8
SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD (SEE SFD-G902, 904, 906.
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	68	OGT KEY	OUTGOING CLASS OF TRUNK TEST CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT AND TO A MARKER THROUGH THE MASTER TEST FRAME CONNECTOR CIRCUIT IN ORDER TO WIRE DIRECT THE MARKER TO SET UP A TEST CONNECTION TO THE OUTGOING TRUNK UNDER TES.
	74	TSTB (SW) OGT	
1,2	11 ZVP	IC KEY TAN	INCOMING CLASS OPERATED CONTROLS THE INCOMING CLASS TRANSMISSION TO THE MARKER.
	11 CY	IC SW TAN	
	11 NQ	ICL SW TAN	
1,2	11,NQ	CL SW TCA/TCB	TRUNK CLASS SWITCH NORMAL GIVES THE TCA TRUNK AUXILIARY CLASS MARK AND OPERATED GIVES THE TCB TRUNK AUXILIARY CLASS MARK.
	WW	NONE	
1,2	11,OX	2DTO KEY	TRANSLATOR CLASS OPERATE AS REQUIRED AND PRIME MARKER WITH NECESSARY TRANSLATION FOR SELECTED ROUTE.
	17,NP	11/X11 KEY	
	17,SX	LT1 KEY	
	17,PH	LT2 KEY	
	11,EC	FVDO KEY	
	11,OY	LT3 KEY	
	NT,OW	LOC TRNSL (ALL KEYS NORMAL)	
	11,NQ	TRNA SW (LT,LT1, LT2,LT3,2DT X11,11, FVD)	
1,2	19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
	52	MT (0-11)	
	81	MTU SW (0-9)	
		MTT1 KEY	
1,2	4,KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH A THREE DIGIT AREA CODE OR THREE DIGIT OFFICE CODE.
	4,ZVL	A-C SW (0-9)	
1,2	4,KX	D(0-9)KEY	CALLED DIGITS (D-K) PRIMES THE MARKER WITH THE CALLED DIGITS.
	4,KY	E(0-9)KEY	
	4,KZ	F(0-9)KEY	
	4,JA	G(0-9)KEY	
	4,JB	H(0-9)KEY	
	4,JC	J(0-9)KEY	
	4,JD	K(0-9)KEY	
	4,ZVL	D-K SW (0-9)	

SD-25800-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1,2	7XA XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS OF SERVICE TENS DIGIT TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
		CST SW(0-9)	
1,2	7,JH RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS OF SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER.
	7,JF	CSU SW (0-9)	
1,2	37 GC,GD	CGB KEY (OPR/NOPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER
	7,JF	CRU SW (0-9)	
		NONE	
1,2	7,ED	CSGA/ CSGB/ KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	
1	4	KY KEY	CONNECT NUMBER ALLOWS ANY NUMBER ON KEYS/SWITCHES A(0-9) THRU L(0-9) TO BE TRANSMITTED TO THE MARKER.
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK LAMP AND KEY CIRCUIT. TLK KEY LOC ON TRUNK TEST PANEL.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
2	9	FS/NTFS KEY	FRAME SELECTION/NO TEST FRAME SELECTION PERMITS SELECTION OF A PARTICULAR TRUNK LINK FRAME UNDER CONTROL OF THE FG(0-2) KEYS AND FS(0-9) KEY/SWITCH WITH (FS KEY) OR WITHOUT (NTFS KEY). FIRST TESTING FOR IDLE TRUNKS ON THAT TRUNK LINK FRAME.
2	U	FG (0,1)KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS(0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGITS OF TRUNK LINK FRAME NUMBER. FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
	79	FG (1,2)KEY	
	80	FG (1,2)KEY	
2	U,79	FS(0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) ON FG(0-8) KEYS LOOK BUSY.
	80	FS SW (0-9)	
2	9	TS/NTTS KEY	TRUNK SELECTION/NO TEST TRUNK SELECTION MAKES ALL TRUNKS EXCEPT THE ONE CORRESPONDING TO THE OPERATED TS(0-19) KEYS OR SWITCH LOOK BUSY TO THE MARKER AND IF NTTS KEY IS OPERATED, WILL OPERATE THE "TST" RELAY IN THE TLF WHICH REMOVES THE PLUGGED BUSY CONDITION FROM ALL TRUNKS ON THAT TRUNK LINK FRAME.

ISSUE	DWG SIZE	
5	6S	TEST-FRAME SET UP-OUTGOING TRUNK (TANDEM) CLASS OF TEST

SFD-10-01- **M602** BELL LABORATORIES

SD-25800-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
2	9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-9) KEY LOOK BUSY TO THE MARKER.
	9,JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS (TS0-19) KEY.
		TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK.
2	8, 35	OSS KEY	OUTGOING SENDER SELECTION WITH THE SGA/SGB KEY OPERATED. DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR AN IDLE SENDER
2	8, 35	SGA/ SGB KEY	SENDER SUBGROUP A/SENDER SUBGROUP B WITH THE OSS KEY ALSO OPERATED. DIRECTS THE MARKER TO CONNECT TO THE A OR B SUBGROUP OF SENDERS WITHOUT FIRST TESTING FOR IDLE SENDERS.
2	8, 83	OS (0-4) KEY	OUTGOING SENDER SELECTS A PARTICULAR SENDER WITHIN A SUBGROUP.
	84	OS SW (0-4)	
2	9,QE	RA (0-3) KEY	ROUTE ADVANCE ALLOWS THE MARKER TO FIND AN IDLE TRUNK ONLY AFTER IT HAS ROUTE ADVANCED EXACTLY THE NUMBER OF TIMES CORRESPONDING TO KEY OR SWITCH SETTING.
	9,QF	RA SW (0-5)	
	9,IB	RA SW (0-11)	
	9,CG	RAU SW (0-9)	
	9/99, DL	RATI KEY	
2	9	GPA/ GPB KEY	ALLOTTER GROUP A AND B USED ON TEST REQUIRING THE MARKER TO USE A ROUTE WHICH HAS ALLOTTED TRUNK GROUPS.
3	1	REC KEY	RECORD CAUSES MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING.
3	129, ZQY, ZQ0	OBS KEY	OBSERVED GROUNDS THE OBST LEAD INSTEAD OF NOBT TO SIMULATE AN ORIGINATING REGISTER ON AN OBSERVED CALL.
3	17,US, VM	TOBS KEY	TRUNK OBSERVING PROVIDES PATH FOR OPERATING TOBS RELAY IN MARKER
3	4	TTL KEY	TERMINATING TEST LINE OPERATED ON TRUNK TEST TO CAUSE AN INCOMING TRUNK TEST LINE NUMBER TO BE TRANSMITTED TO THE MARKER USED TO SET UP THE TEST CONNECTION.
3		ANS KEY	ANSWER WHEN OPERATED TO ANSWER EXTENDS THE TIP AND RING LEADS TOWARD A TERMINATING TEST LINE CONSISTING OF RESISTORS AND RELAYS SIMULATING AN INCOMING TRUNK CIRCUIT. THE RESISTANCE IN THIS LOOP GIVES AN OPERATE TEST TO CALLED PARTY SUPERVISORY RELAY OF THE TRUNK CIRCUITS. ANS KEY LOC ON TTC PANEL
3	17	ROT	REORDER TEST SETS UP REORDER IN THE TRUNK BEING TESTED.

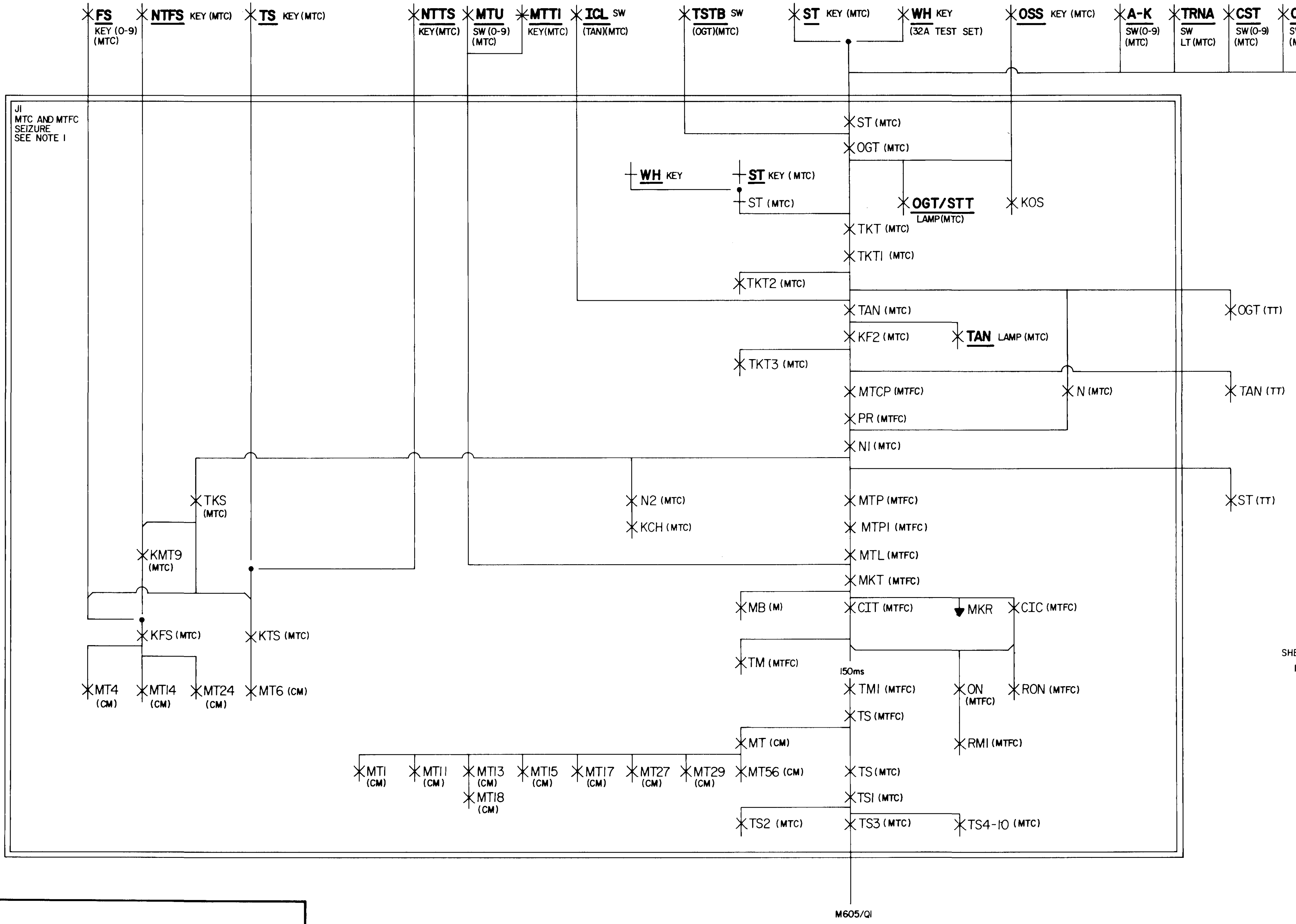
TEST FRAME SETUP-OUTGOING TRUNK (TANDEM)
CLASS OF TEST

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES | SFD-10-01- | M603

OUTGOING CLASS OF TRUNK TEST

(OGT ARRANGED FOR TANDEM)

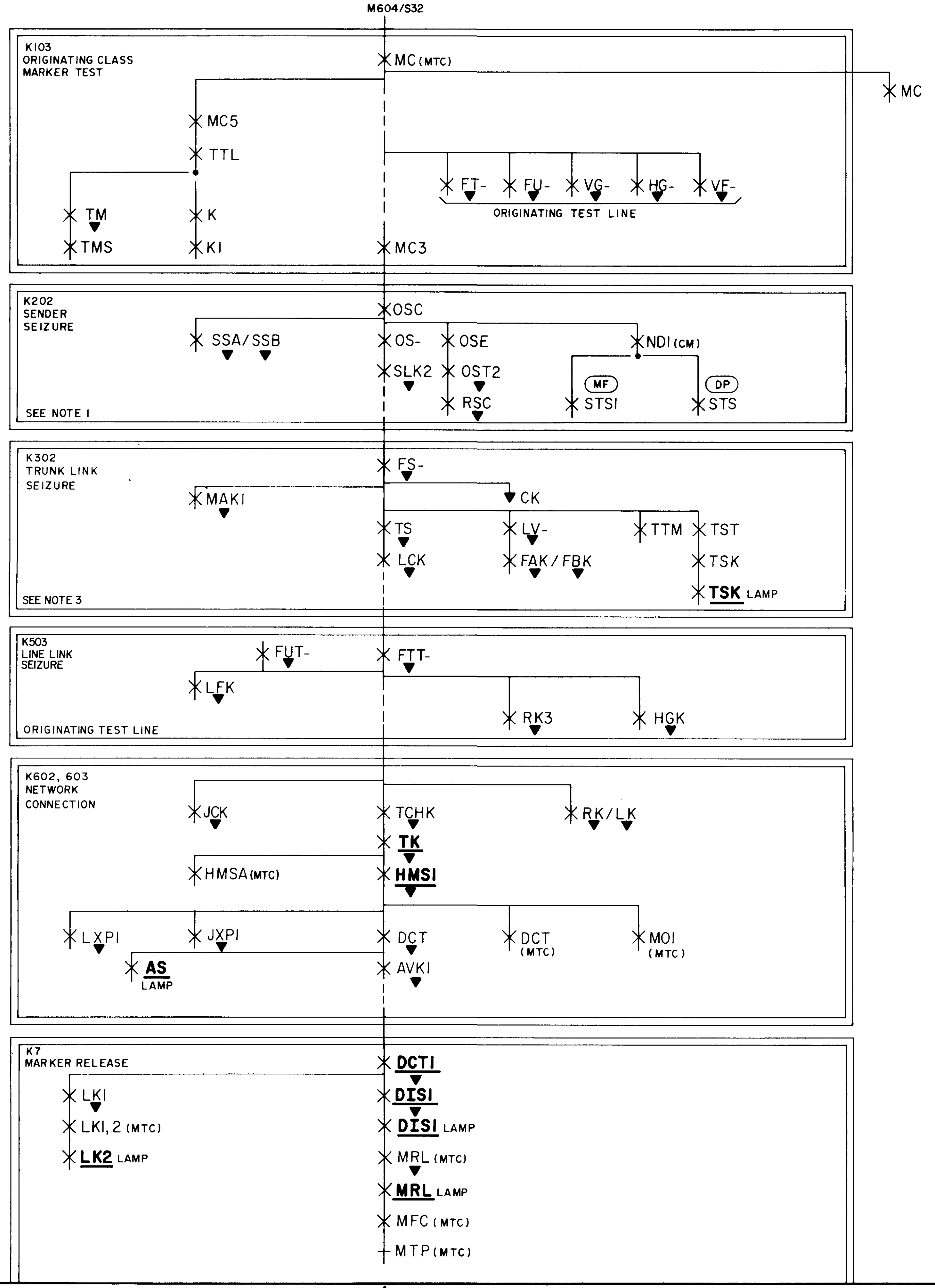


SHEET NOTES:

1. THE SEQUENCE CHART SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE OUTGOING CLASS OF TRUNK TEST. THE CIRCUIT PATHS FOR THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE 5	DWG SIZE 6S	SEQUENCE CHART OUTGOING CLASS OF TRUNK TEST (OGT-TANDEM)
SFD-10-01-	M604	BELL LABORATORIES

SFD-10-01-M604



SHEET NOTES:

1. A NO (DIGITS) SIGNAL IS GIVEN TO THE SENDER TO ALLOW IT TO RELEASE WITHOUT PULSING.
2. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD-27718-01).
3. (TST) RELAY OPERATES IN TRUNK LINK FRAME FROM OPERATED (NTTS) KEY, MTC.

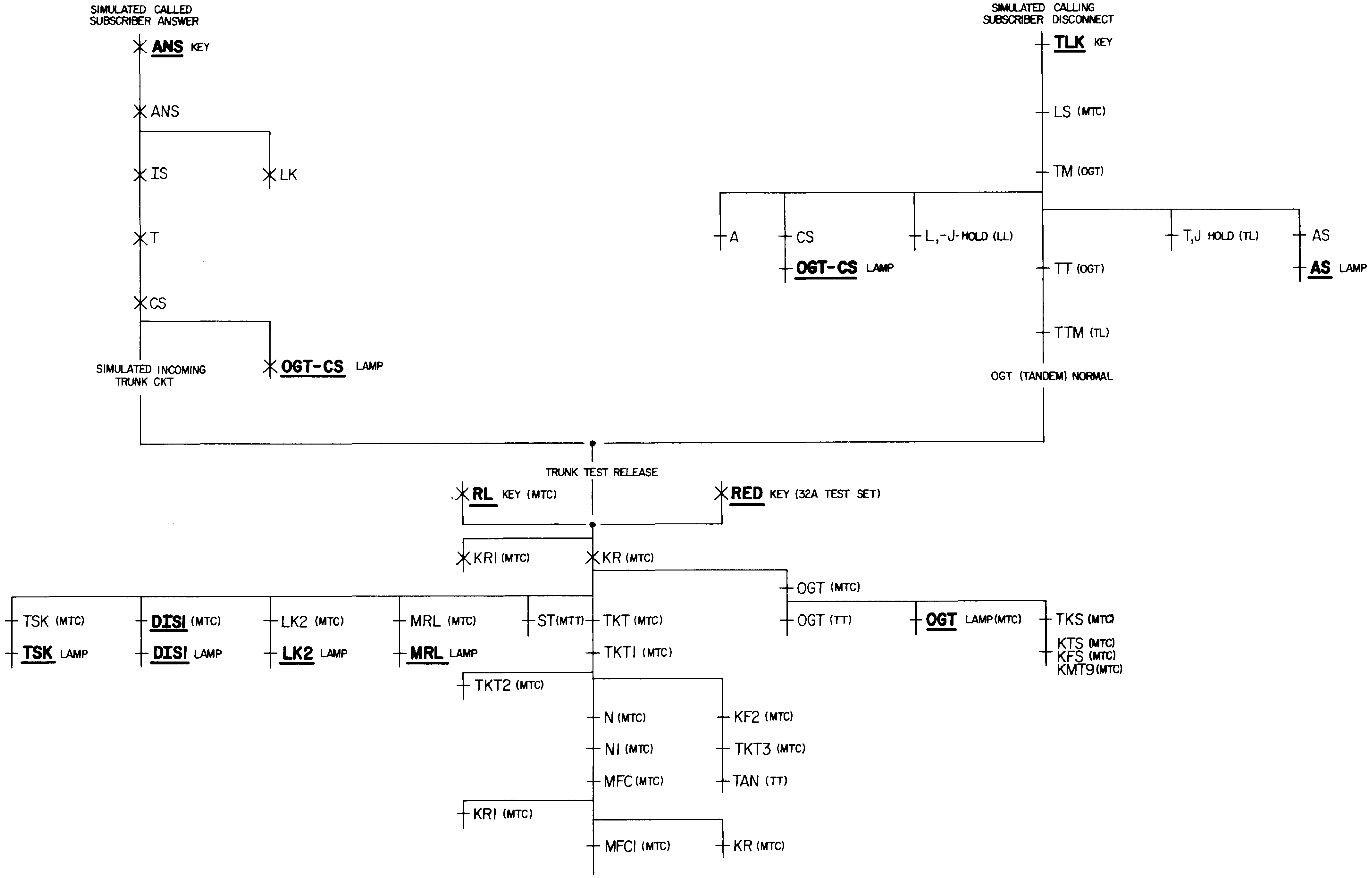
SFD-10-01-M605

SEQUENCE CHART
OUTGOING TRUNK (TANDEM)
CLASS OF TEST

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M605

OUTGOING CLASS OF TRUNK TEST
(OGT ARRANGED FOR TANDEM)



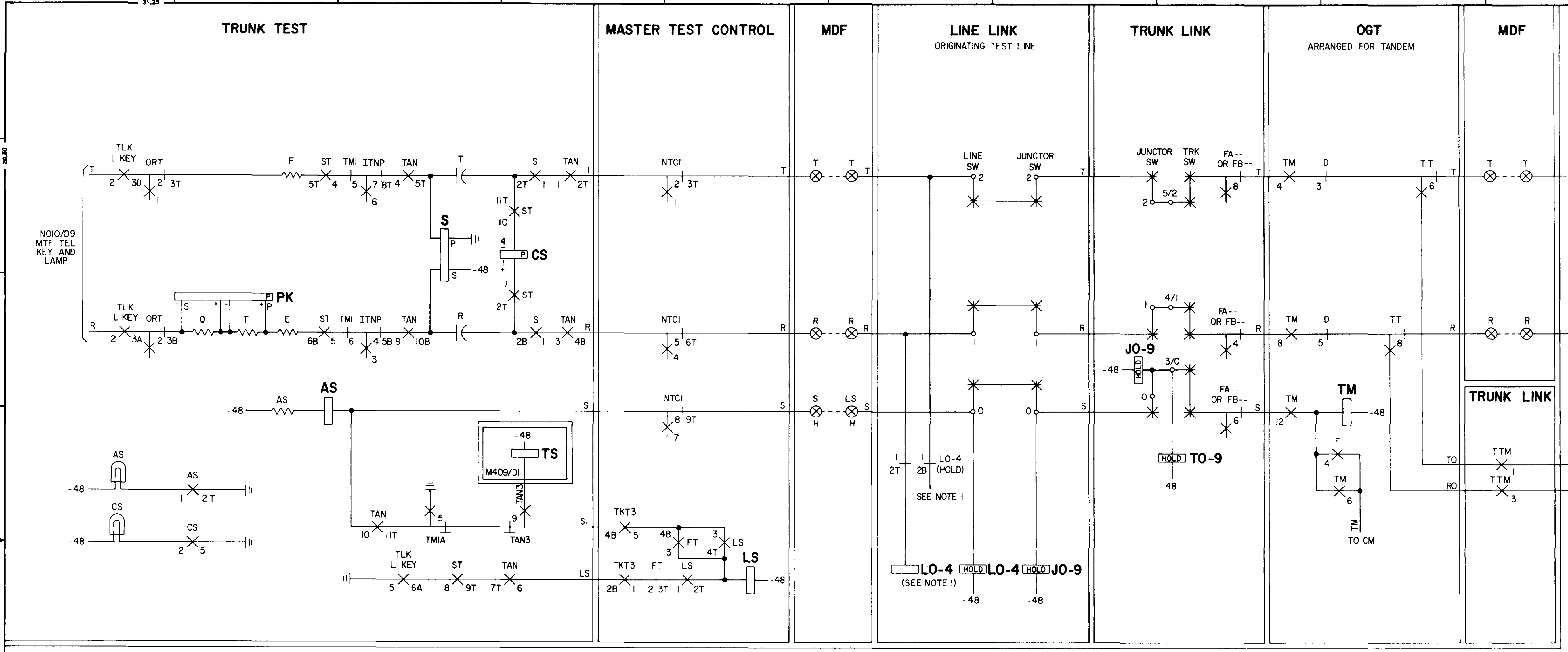
SEQUENCE CHART
OUTGOING TRUNK (TANDEM) CLASS OF TEST

DWG SIZE 6S	ISSUE 5
BELL LABORATORIES SFD-10-01-	M607

SFD-10-01-M607

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



SHEET NOTES:

1. THE LINE CIRCUITS ASSOCIATED WITH THE ORIGINATING TEST LINE SHALL HAVE BATTERY DISCONNECTED FROM (LO-4) RELAY AND GROUND REMOVED FROM (LO-4) CONTACT 1 AND 2B.

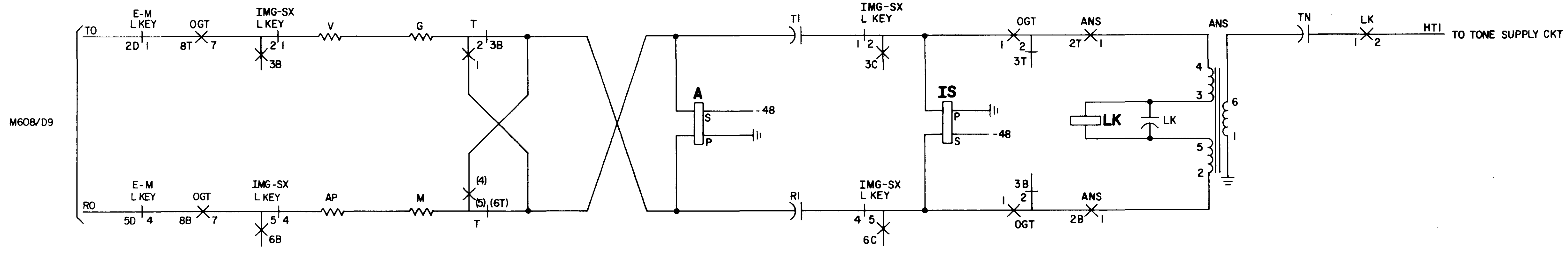
ISSUE	DWG SIZE	
5	6S	OUTGOING TRUNK TEST (TANDEM) CLASS OF TEST ESTABLISHED TEST CONNECTION ON MTF

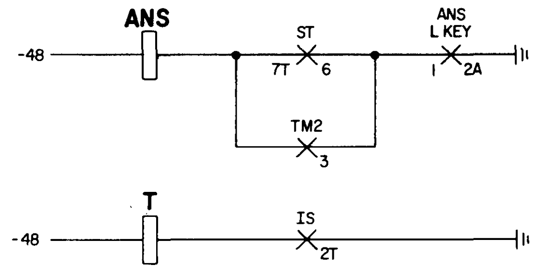
SFD-10-01- M608 BELL LABORATORIES

SFD-10-01-M608

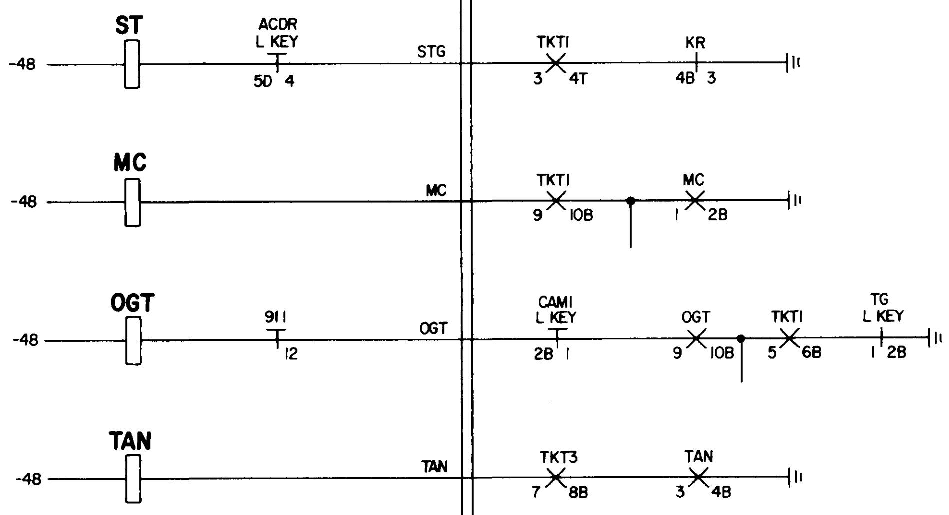
TRUNK TEST

(MTF)





MASTER TEST CONTROL



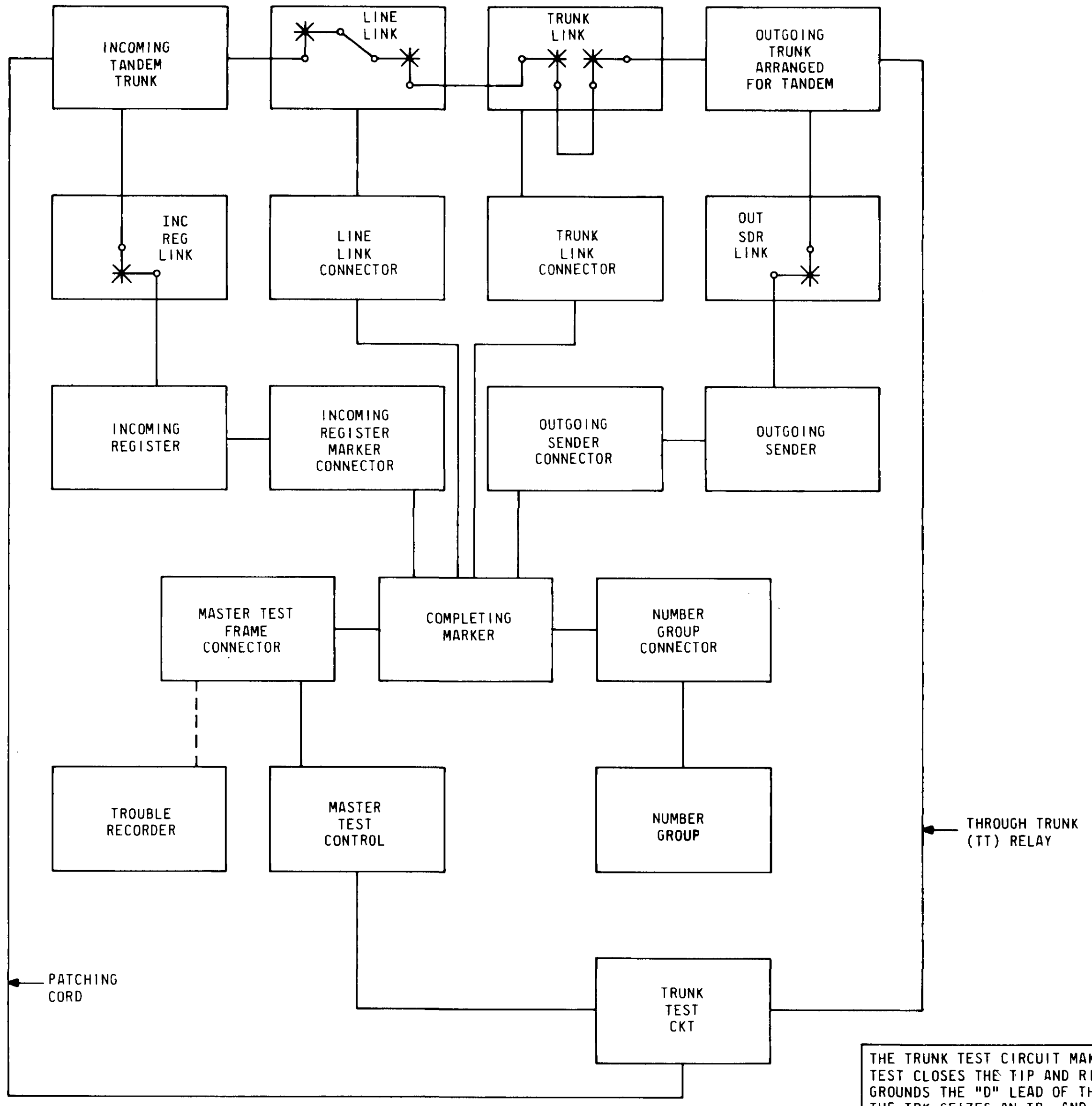
OUTGOING TRUNK (TANDEM)
CLASS OF TRUNK TEST
ESTABLISHED TEST CONNECTION ON MTF

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M609

INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST

(INCOMING TANDEM TRUNK)



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M702	TEST FRAME SETUP - ITNP CLASS OF TRUNK TEST (ITT)
M703	RESERVED
M704	SEQUENCE CHART - INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITT)
M705	SEQUENCE CHART - INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITT)
M706	SEQUENCE CHART - INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST (ITT)
M707	RESERVED
M708	INCOMING (TANDEM) TRUNK TEST - ITNP CLASS OF TRUNK TEST ESTABLISHED TEST CONN MTF
M709	INCOMING (TANDEM) TRUNK TEST - ITNP CLASS OF TRUNK TEST ESTABLISHED TEST CONN MTF

THE TRUNK TEST CIRCUIT MAKING AN ITNP TEST CLOSES THE TIP AND RING, AND GROUNDS THE "D" LEAD OF THE TANDEM TRK. THE TRK SEIZES AN IR, AND BECAUSE OF THE GROUNDED "D" LEAD CONNECTS TO A MARKER IMMEDIATELY WITHOUT WAITING FOR A NUMBER TO BE PULSED. THE MARKER RECEIVING A TEST INDICATION FROM THE REGISTER CONNECTS THRU THE MTFC TO THE MTC WHICH SUPPLIES THE CODE OF AN OUTGOING ROUTE THE MARKER SETS UP THE CONNECTION FROM THE LINE LINK APP OF THE TANDEM INCOMING TO THE OGT IN NORMAL MANNER.

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

PART M7
INCOMING (TANDEM) TRUNK TEST
ITNP CLASS OF TRUNK TEST

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES | **SFD-10-01-** | **M701**

E-7421 (6-73)
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INCOMING TRUNK CIRCUITS
TESTS USING TRUNK TEST CIRCUIT
SD-25918-01

	FEATURE OR EQUIPMENT TO BE TESTED	BSP	PAR
1	TRUNK SEIZURE	218-251-501	A
2	SUPERVISION - ORIGINATING AND TERMINATING ENDS DISCONNECT	218-251-501	D
3	SUPERVISION - TERMINATING END DISCONNECT	218-251-501	E
4	OVERFLOW	218-251-501	H

BSP-218251-501 ISS 9

SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25918-01 TRUNK TEST CIRCUIT (TTC)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD. (SEE SFD G902,904,906)
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG OR OPT	KEY SWITCH	FUNCTION
1	68, ZO	ITNP KEY	INCOMING TRK NO PULSING CAUSES THE TEST CIRCUIT TO CONNECT TO THE TRUNK TEST CIRCUIT WHICH HAS BEEN PREVIOUSLY PATCHED TO THE INCOMING TRUNK TO BE TESTED.
	74	TSTB SW ITNP	
1,2	11 ZVP	IC KEY TAN	INCOMING CLASS OPERATED CONTROLS THE INCOMING CLASS TRANSMITTED TO THE MARKER
	11 CY	IC SW TAN	
	11 NQ	TRNB SW FVD/LT	
		ICL SW TAN	
1,2	13, WL	ITC-KEY (0-9)	INCOMING TRUNK CLASS OPERATED TO CONTROL THE INCOMING TRUNK CLASS TRANSMITTED TO THE MARKER SEE OFFICE RECORDS FOR CORRECT SETTING.
	13, JF	ITC SW (0-9)	
1,2	4, KX	A-C (0-9) KEY	CALLED DIGITS (A-C) PRIMES THE MARKER WITH A THREE DIGIT AREA CODE OR THREE DIGIT OFFICE CODE.
	4 ZVL	A-C (0-9) SW	
1,2	4,KX	D(0-9) KEY	CALLED DIGITS (D-K) PRIMES THE MARKER WITH CALLED DIGITS.
	4,KY	E(0-9) KEY	
	4,KZ	F(0-9) KEY	
	4,JA	G(0-9) KEY	
	4,JB	H(0-9) KEY	
	4,JC	J(0-9) KEY	
	4,JD	K(0-9) KEY	
	4,ZVL	D-K SW (0-9)	
1	4	KY KEY	CONNECT NUMBER ALLOWS ANY NUMBER ON KEYS & SW A(0-9)-K(0-9) TO BE TRANSMITTED TO THE MARKER
1,2	7,RB	RC (1-15) KEY	RINGING COMBINATION CONTROLS THE RINGING COMBINATION SET UP BY THE MARKER ON THE RINGING SELECTION SWITCH.
	7,RC	RC (1-10) KEY	
		OTRC KEY	
	7,JF	RCU SW (1-10)	
	7,ZYH ZVI	RCT 1 KEY	
1		LS KEY	LOW RESISTANCE SLEEVE OPERATED PLACES A LOW RESISTANCE RELAY ON THE SLEEVE TO THE TRUNK TO DETECT WHEN AN INCOMING REGISTER IS CONNECTED AND TO INFORM THE REGISTER THAT A TEST CALL IS IN PROGRESS.
		HS KEY	HIGH RESISTANCE SLEEVE OPERATED PLACES A HIGH RESISTANCE RELAY ON THE SLEEVE TO THE TRUNK TO DETECT WHEN AN INCOMING REGISTER IS CONNECTED. (KEYS LOC ON TRUNK TEST PANEL)

SD-25800-01

SEE NOTE	FIG OR OPT	KEY SWITCH	FUNCTION
1		SLP KEY	SHORT LOOP CONNECTS LOOP OF 3116 OHMS (INCLUDING CS RELAY) TO THE A RELAY OF THE TRUNK CIRCUIT
		LLP KEY	LONG LOOP CONNECTS LOOP OF 6205.6 OHMS (INCLUDING CS RELAY) TO THE A RELAY OF THE TRUNK CIRCUIT.
		SXS KEY	STEP-BY-STEP OPERATED WHEN TESTING INCOMING TRUNKS FROM A STEP-BY-STEP OFFICE. LOOP OF 2560 OHMS KEYS LOC ON TRUNK TEST PANEL.
1		TLK KEY	TALK USED TO COMPLETE TIP AND RING LEADS TO SIMULATE LINE AT MTF JACK, LAMP, AND KEY CIRCUIT. KEY LOC ON TRUNK TEST PANEL
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
3		ANS KEY	ANSWER KEY OPERATES (ANS) RELAY WHICH SUPPLIES TERMINATING RESISTANCE TO THE CADDED SUPERVISORY RELAY OF INCOMING TRUNK CIRCUIT. AT THE SAME TIME RELAY(LK) CHECKS THE CONTINUITY OF THE LOOP AND CONNECTS HIGH TONE BACK THRU THE TRUNK CIRCUIT. KEY LOC ON TRUNK TEST PANEL
3	1	REC KEY	RECORD CAUSES MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE RELEASING.

TEST FRAME SETUP
ITNP CLASS OF TRUNK TEST
(ITT)

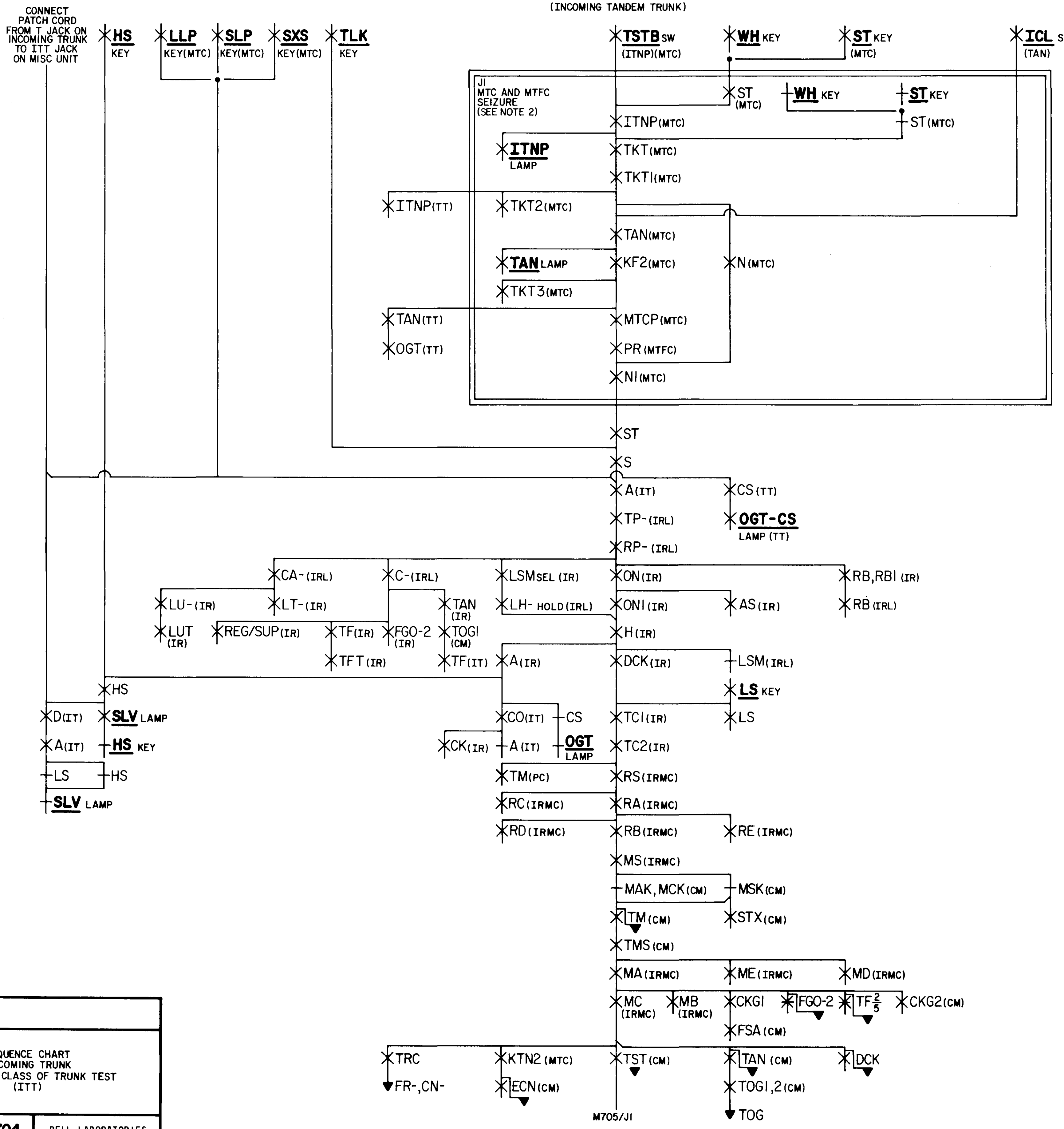
ISSUE
5

DWG SIZE
6S

SFD-10-01- M702 BELL LABORATORIES

INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST

(INCOMING TANDEM TRUNK)



SHEET NOTES:

1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD-27718-01).
2. THE SEQUENCE CHART SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE NO-PULSING CLASS OF TRUNK TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE JI PART.

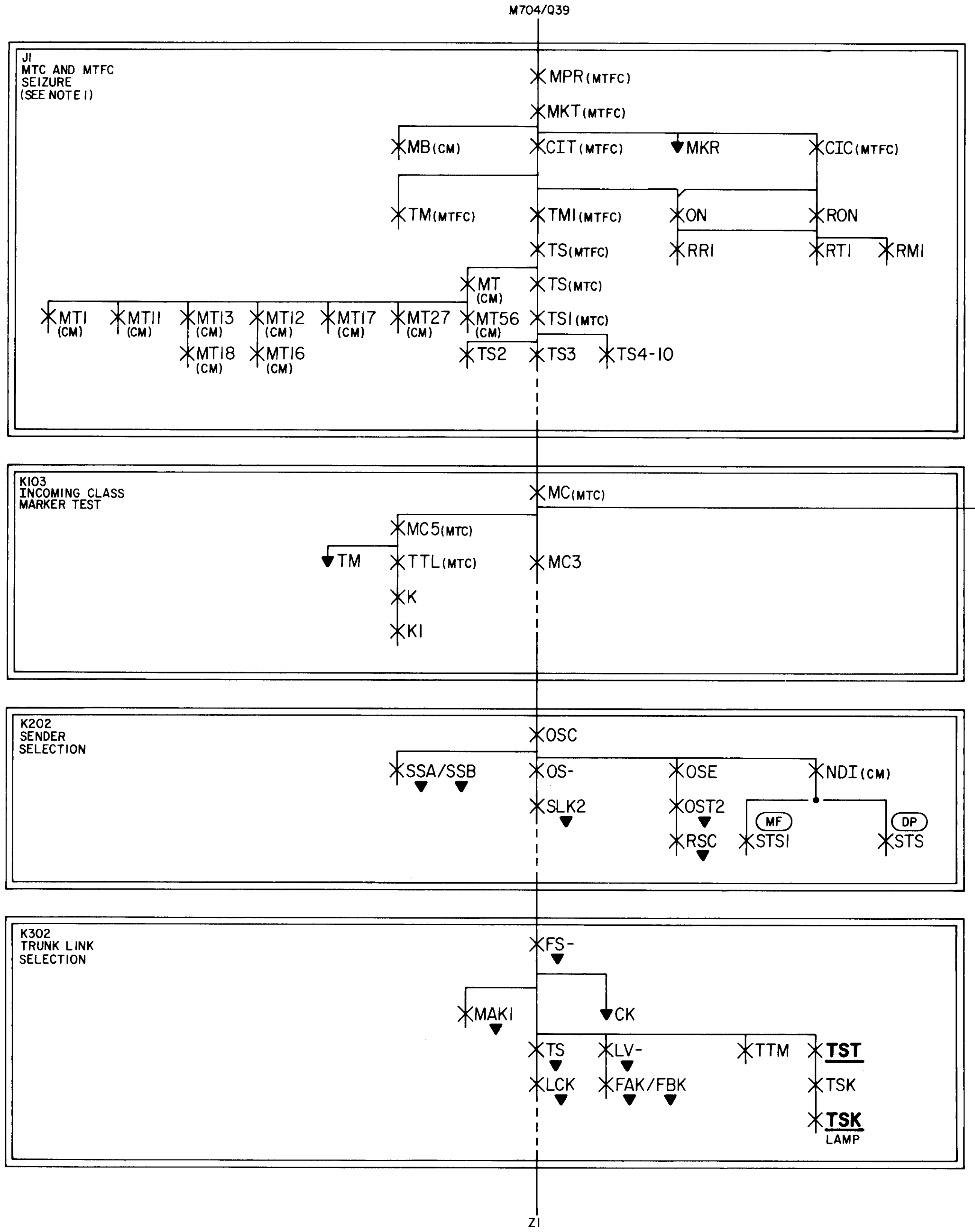
SEQUENCE CHART
INCOMING TRUNK
NO-PULSING CLASS OF TRUNK TEST
(ITT)

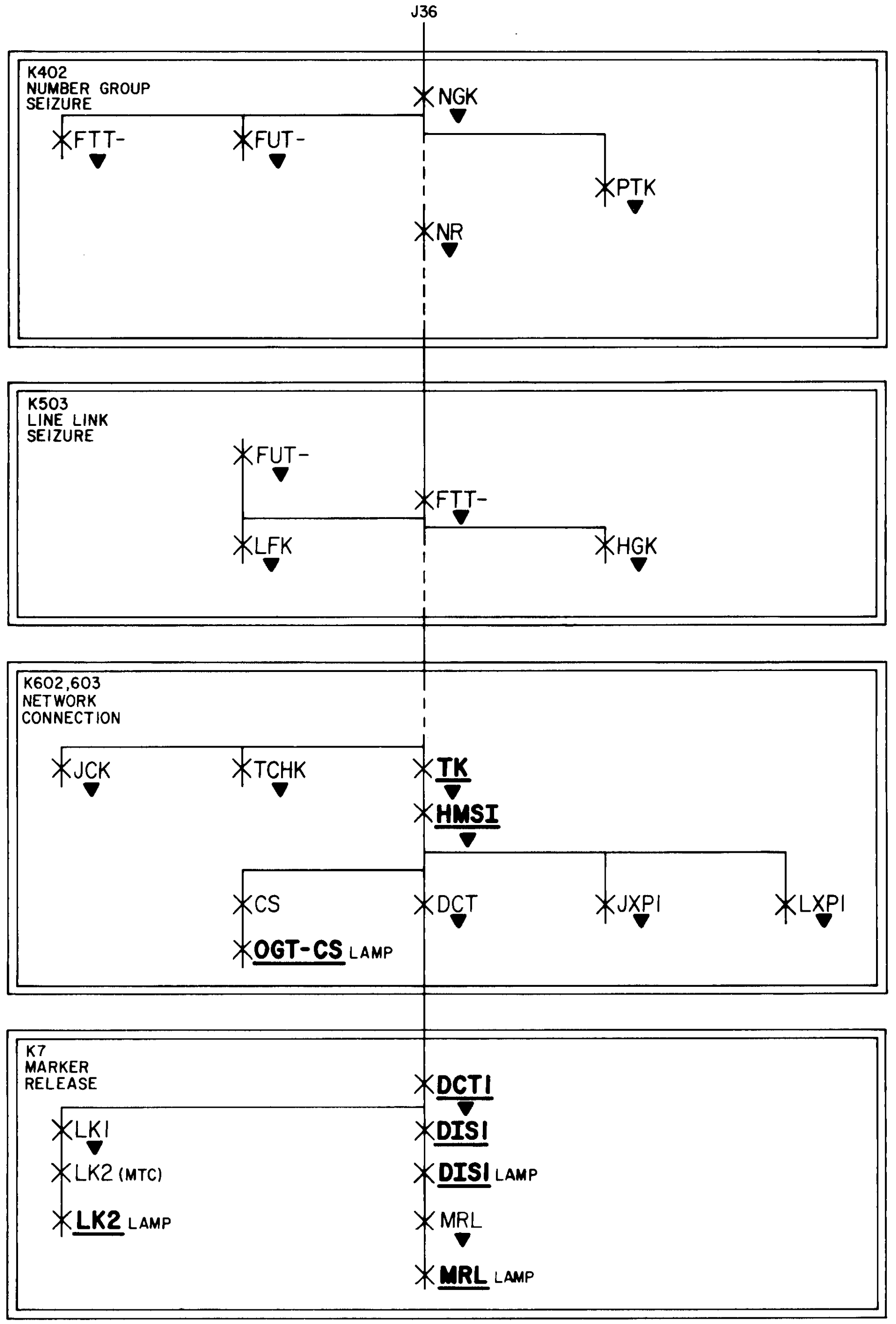
ISSUE	DWG SIZE
5	6S

SFD-10-01- M704 BELL LABORATORIES

INCOMING TRUNK NO-PULSING CLASS OF TRUNK TEST

(INCOMING TANDEM TRUNK)





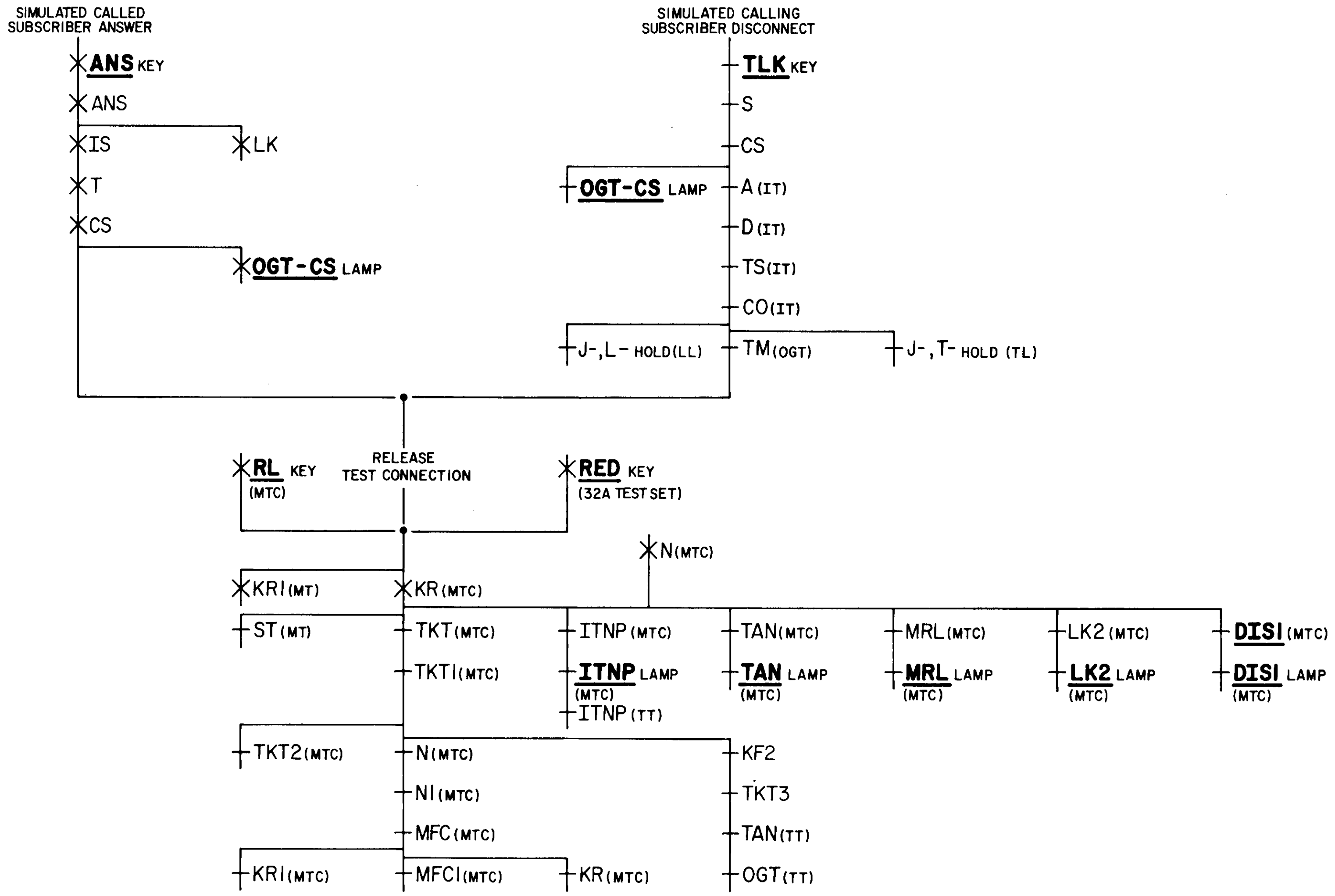
SHEET NOTES:

1. THE SEQUENCE CHART SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE NO-PULSING CLASS OF TRUNK TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE J1 PART.

SEQUENCE CHART
INCOMING TRUNK
NO-PULSING CLASS OF TRUNK TEST
(ITT)

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- M705



SEQUENCE CHART
INCOMING TRUNK
NO-PULSING CLASS OF TRUNK TEST
(ITT)

ISSUE	DWG SIZE
5	6S

SFD-10-01- M706 BELL LABORATORIES

SFD-10-01-M706

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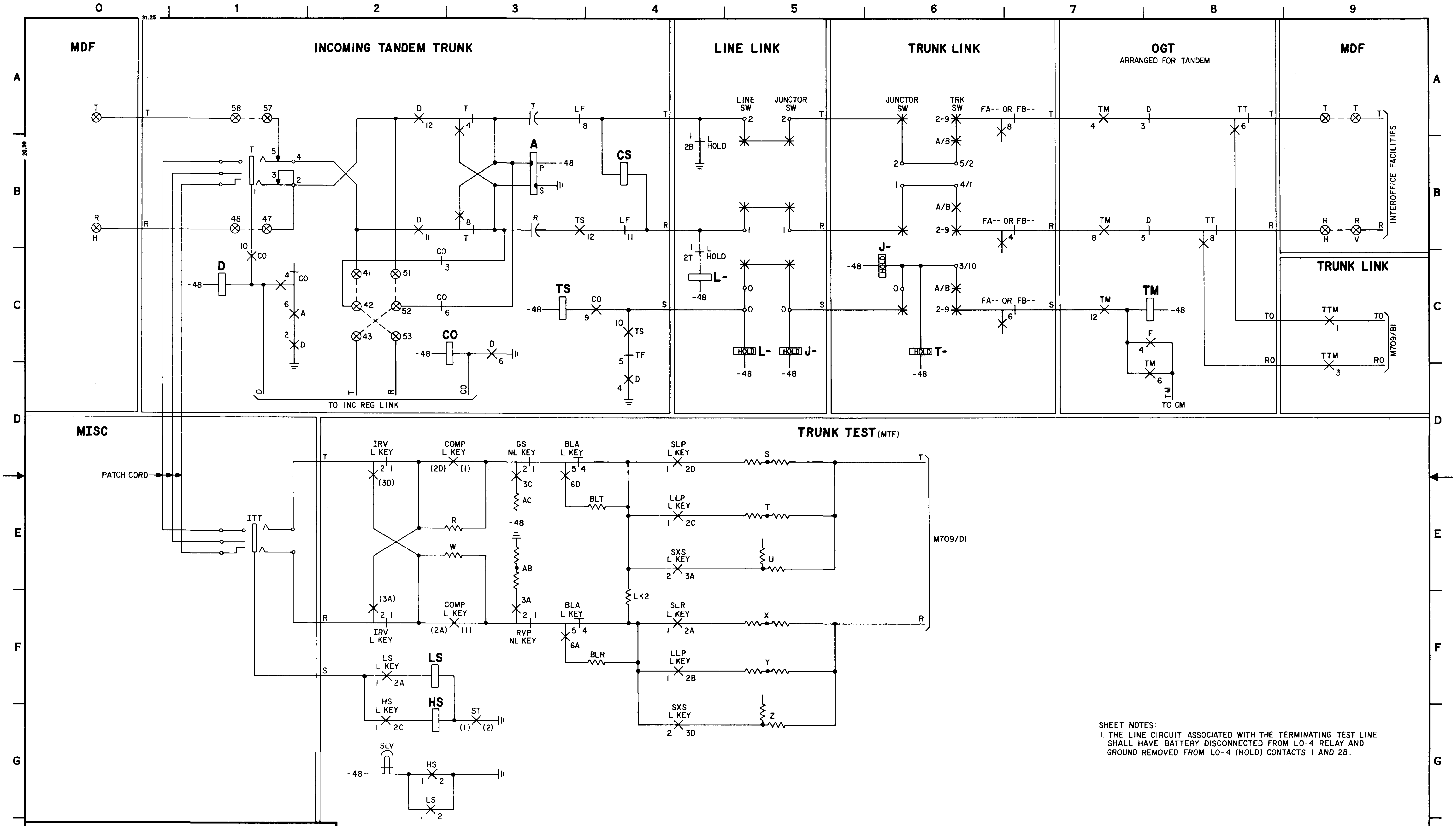


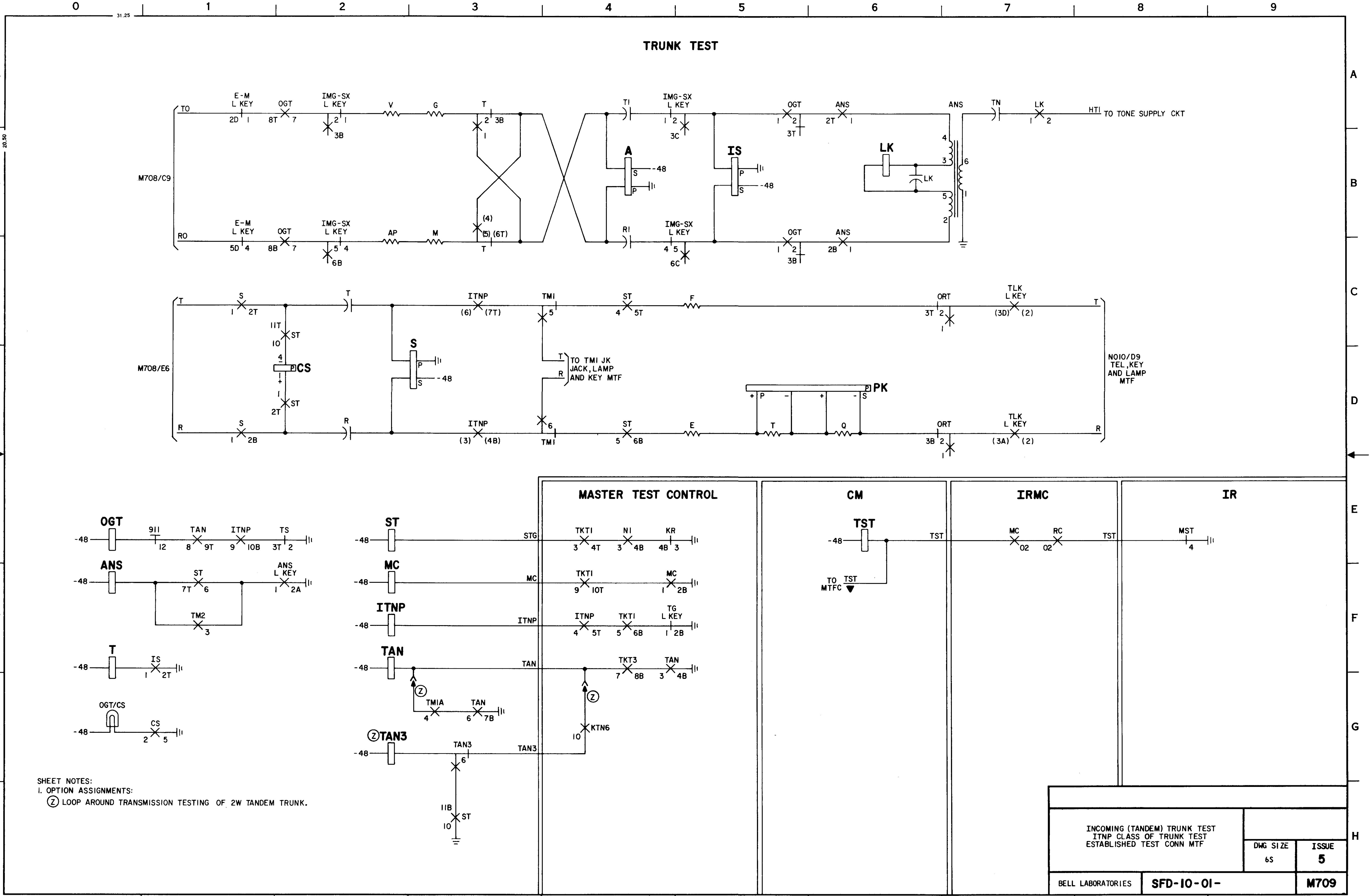
SHEET NOTES:
1. THE LINE CIRCUIT ASSOCIATED WITH THE TERMINATING TEST LINE SHALL HAVE BATTERY DISCONNECTED FROM LO-4 RELAY AND GROUND REMOVED FROM LO-4 (HOLD) CONTACTS 1 AND 2B.

INCOMING (TANDEM) TRUNK TEST
ITNP CLASS OF TRUNK TEST
ESTABLISHED TEST CONN MTF

ISSUE	DWG SIZE
5	6S

SFD-10-01- M708 BELL LABORATORIES

SFD-10-01-M708



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓩ LOOP AROUND TRANSMISSION TESTING OF 2W TANDEM TRUNK.

INCOMING (TANDEM) TRUNK TEST
ITNP CLASS OF TRUNK TEST
ESTABLISHED TEST CONN MTF

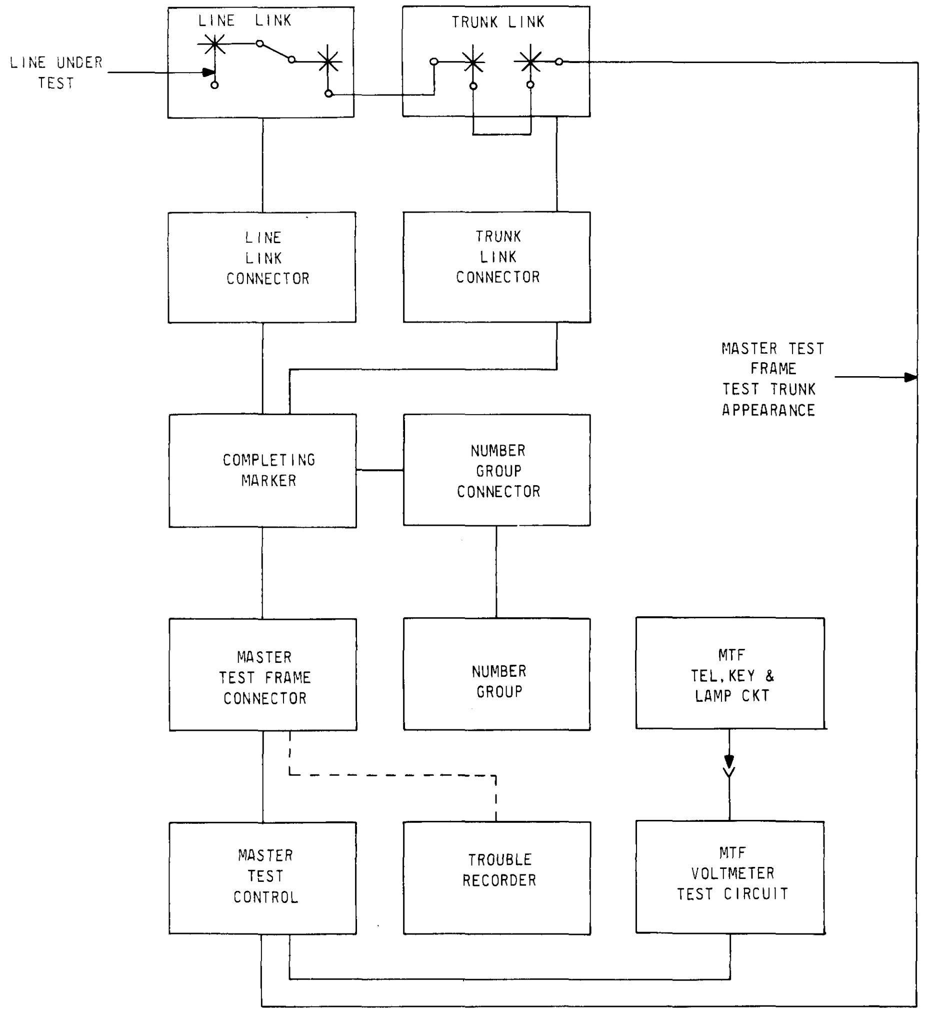
DWG SIZE	ISSUE
6S	5

BELL LABORATORIES | SFD-10-01- | M709

SFD-10-01-M709

SUBSCRIBER LINE CLASS OF TEST

(LT)



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N003	RESERVED
N004	SEQUENCE CHART - SUBSCRIBER LINE CLASS OF TEST
N005	SEQUENCE CHART - SUBSCRIBER LINE CLASS OF TEST
N006	SEQUENCE CHART - VOLTMETER TESTS SUBSCRIBER LINES OR TRUNKS
N007	RESERVED
N008	SUBSCRIBER LINE CLASS OF TEST - ESTABLISHED CONN TO VOLTMETER
N009	VOLTMETER TEST ON SUBSCRIBER LINES OR TRUNKS
N010	MASTER TEST FRAME TELEPHONE CIRCUIT CONN AND CONTROL

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE

ISSUE
5

PART NO.
SUBSCRIBER LINE
CLASS OF TEST
(LT)

SFD-10-01-N001

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

PRINTED IN U. S. A.

LINE TESTS - CUSTOMER LINE
USING VOLTMETER TEST OF MASTER TEST FRAME

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR.
1	TESTS FOR TROUBLE CONDITIONS-CUSTOMER LINE	218-245-501	B

BSP 218-245-501, ISS 4
SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)
SD-25792-01 MASTER TEST FRAME VOLTMETER TEST CIRCUIT (VM TST)

SHEET NOTES:

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD. (SEE SFD-D902/D904/D906).
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
1	68	LT KEY	LINE TEST CAUSES THE MTC TO CONNECT TO A MARKER THROUGH THE MTFC IN ORDER TO DIRECT IT TO SET UP A TEST CONNECTION FROM THE MASTER TEST FRAME VOLTMETER TEST (VM TST) CIRCUIT TO THE LINE TO BE TESTED.
	74	TSTB SW (LT)	
1	19, 21	MT (0,1)KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE SPECIAL MARKER SELECTED.
	52	MT SW (0,1)	
	81	MTU SW (0-9)	
1,2	4,KX	A-D (0-9) KEY	DIGITS DIRECTORY NUMBER OF LINE BEING TESTED.
	4,ZVL	A-D SW (0-9)	
1,2	11, ZVP	IC KEY (OA,OAT/ OB,OBT)	INCOMING CLASS OPERATED CONTROLS THE INCOMING CLASS TRANSMITTED TO THE MARKER.
	CY, 11	IC SW (OA,OAT/ OB,OBT)	
	11, NQ, ZE	TRNB SW (OA/OB)	
		THC KEY	THC KEY SIGNALS THE MARKER TO COMPLETE TO A THEORETICAL OFFICE WHEN THE TRNB SW IS IN THE OA OR OB POSITION.
		ICL SW (INC)	
1,2	11,PA, PB,PC	E KEY	EXTRA THEORETICAL USED IN CONJUNCTION WITH THE INCOMING CLASS KEYS OR SWITCHES FOR EXTRA THEORETICAL NUMBERS IN THE A OR B OFFICE.
	11, NQ	ETHC KEY	
		NONE	EXTRA THEORETICAL NUMBERS NOT USED.
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
3		VMTI KEY	VOLTMETER TEST ASSOCIATES THE VM TST CIRCUIT WITH THE MASTER TEST CONTROL CIRCUIT AND CONNECTS 100V TEST BATTERY THROUGH 100,000 OHMS RESISTANCE OF THE METER TO THE RING SIDE OF LINE. KEY LOC ON VM TST PANEL.
3		VM REV KEY	VOLTMETER REVERSE REVERSES THE VOLTMETER WITH RESPECT TO THE LINE UNDER-TEST WHEN TESTING THE RING SIDE OF THE LINE FOR A POSITIVE BATTERY POTENTIAL WHICH IS GROUNDED, KEY LOC ON VM TST PANEL.
3		TI REV KEY	TIP VOLTMETER REVERSE REVERSES THE VOLTMETER WITH RESPECT TO THE LINE UNDER TEST WHEN TESTING THE TIP SIDE OF THE LINE FOR A POSITIVE BATTERY POTENTIAL WHICH IS GROUNDED. KEY LOCK ON VM TST PANAL.

SD-25800-01

SEE NOTE	FIG. OR OPT	KEY OR SWITCH	FUNCTION
3		G KEY	GROUND OPERATED APPLIES METALLIC TESTS TO THE LINE. KEY LOC ON VM TST PANEL.
3		RG KEY	RINGING ROUND OPERATED REMOVES GROUND BY OPENING THE RINGING GROUND LEADS SO THAT RINGING MAY BE APPLIED TO THE RING (TI REV KEY NORMAL) OR TIP (TI REV KEY) OPERATED. KEY LOC ON VM TST PANEL.
3		FEMF KEY	FOREIGN POTENTIAL USED TO DETECT FOREIGN POTENTIAL ON LINE. KEY LOC ON VM TST PANEL.
3		± KEY	RINGING CONNECTS RINGING CURRENT TO THE TIP AND RING LEADS. KEY LOC ON VM TST PANEL.
3		CC/CR KEY	COIN COLLECT/RETURN OPERATED CONNECTS COIN COLLECT OR COIN RETURN POTENTIAL TO THE LINK. KEY LOC ON VM TST PANEL
3		T KEY	TALK PREPARES THE TELEPHONE CIRCUIT FOR TALKING. KEY LOC ON VM TST PANEL
3		AM KEY	AM KEY CONNECTS 45 TO 50V TEST BATTERY THROUGH 200 OHMS RESISTANCE OF THE METER TO THE RING SIDE OF LINE. KEY LOC ON VM TST PANEL
3		20,000/ 1,000 KEY	20,000/1000 CONNECTS 20V TEST BATTERY THROUGH 20,000 OR 1000 OHMS RESISTANCE OF THE METER TO THE RING SIDE OF THE LINE. KEY LOC ON VM TST PANEL

ISSUE
5

SFD-10-01-N002

TEST FRAME SET-UP
SUBSCRIBER LINE CLASS OF TEST
(LT)

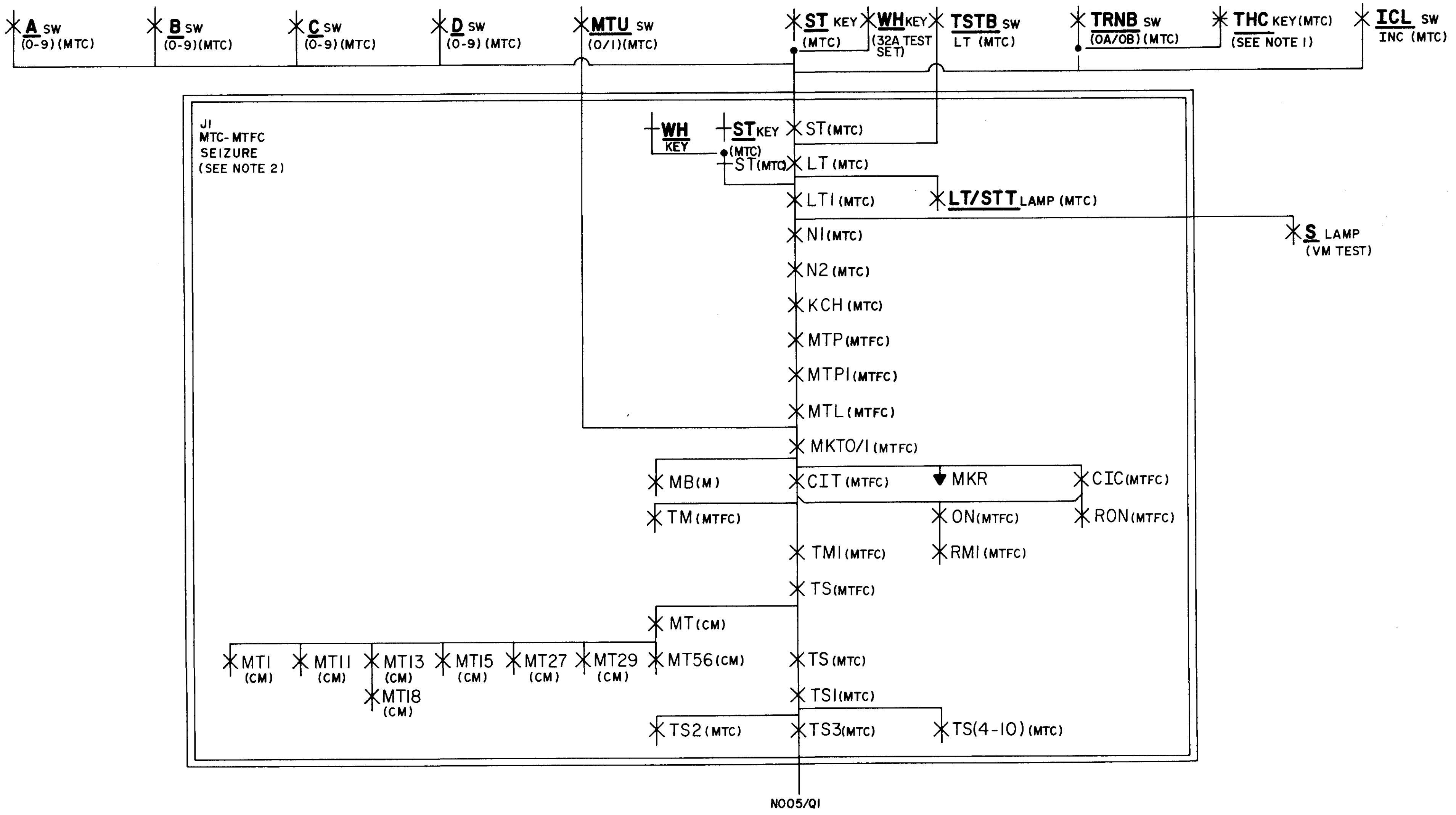
PRINTED IN U. S. A.

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-73)

SUBSCRIBER LINE TEST (LT)



SHEET NOTES:

1. (THC) KEY OPERATED WITH (TRNB) SW (OA/OB) INDICATES (OAT/OBT) THEORETICAL OFFICE.
2. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE LINE TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE
5

SFD-10-01-N004

SEQUENCE CHART
SUBSCRIBER LINE CLASS OF TEST
(LT)

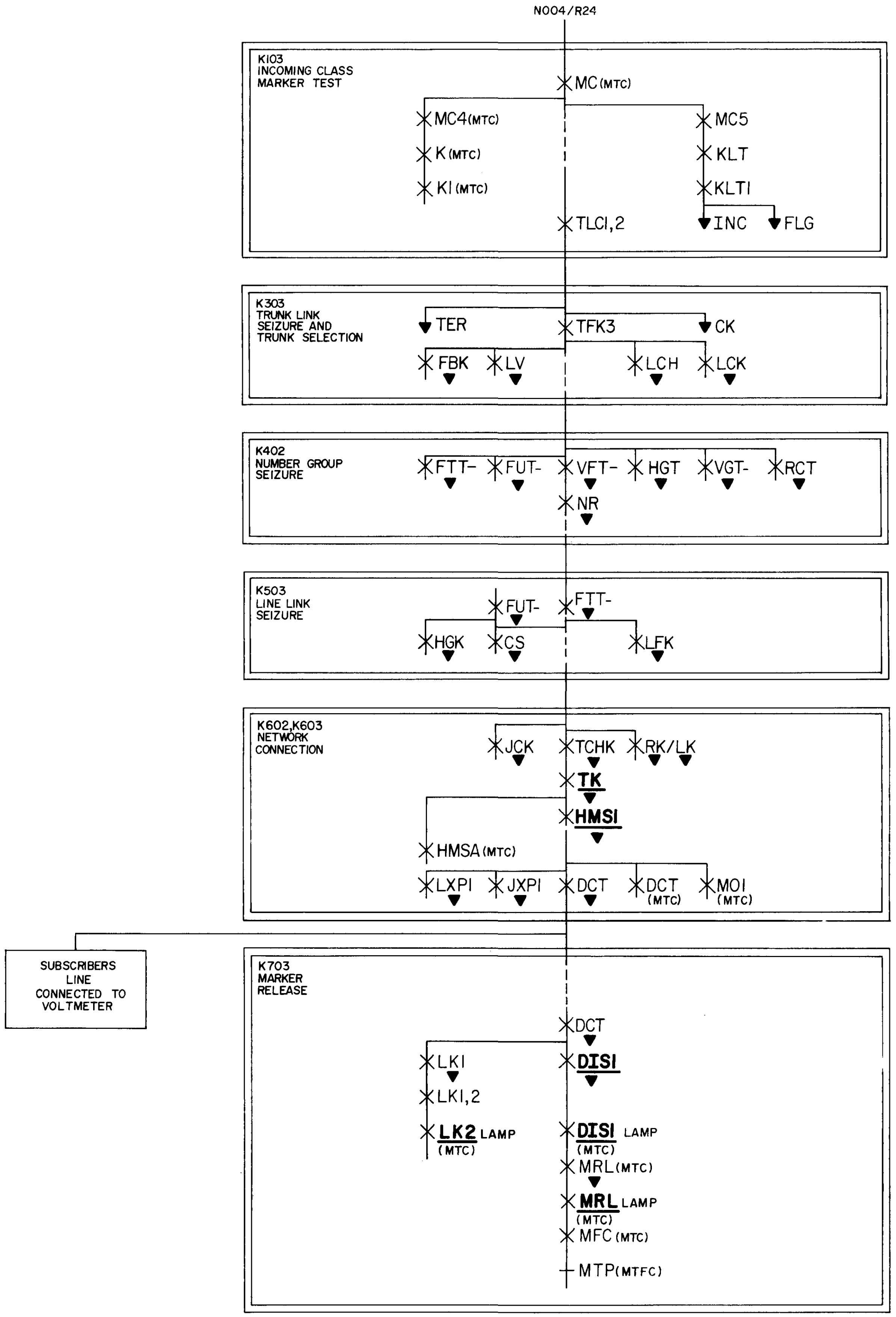
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-71)

SFD-10-01-N004



SHEET NOTES:
1. ALL PUNCH INDICATIONS ARE DOUBLE SIDED TROUBLE RECORD CARD (E-5488-CD-27718-01)

SEQUENCE CHART
SUBSCRIBER LINE CLASS OF TEST
(LT)

DWG SIZE	ISSUE
6S	5

BELL LABORATORIES SFD-10-01- N005

BRUNING 44-131 28142

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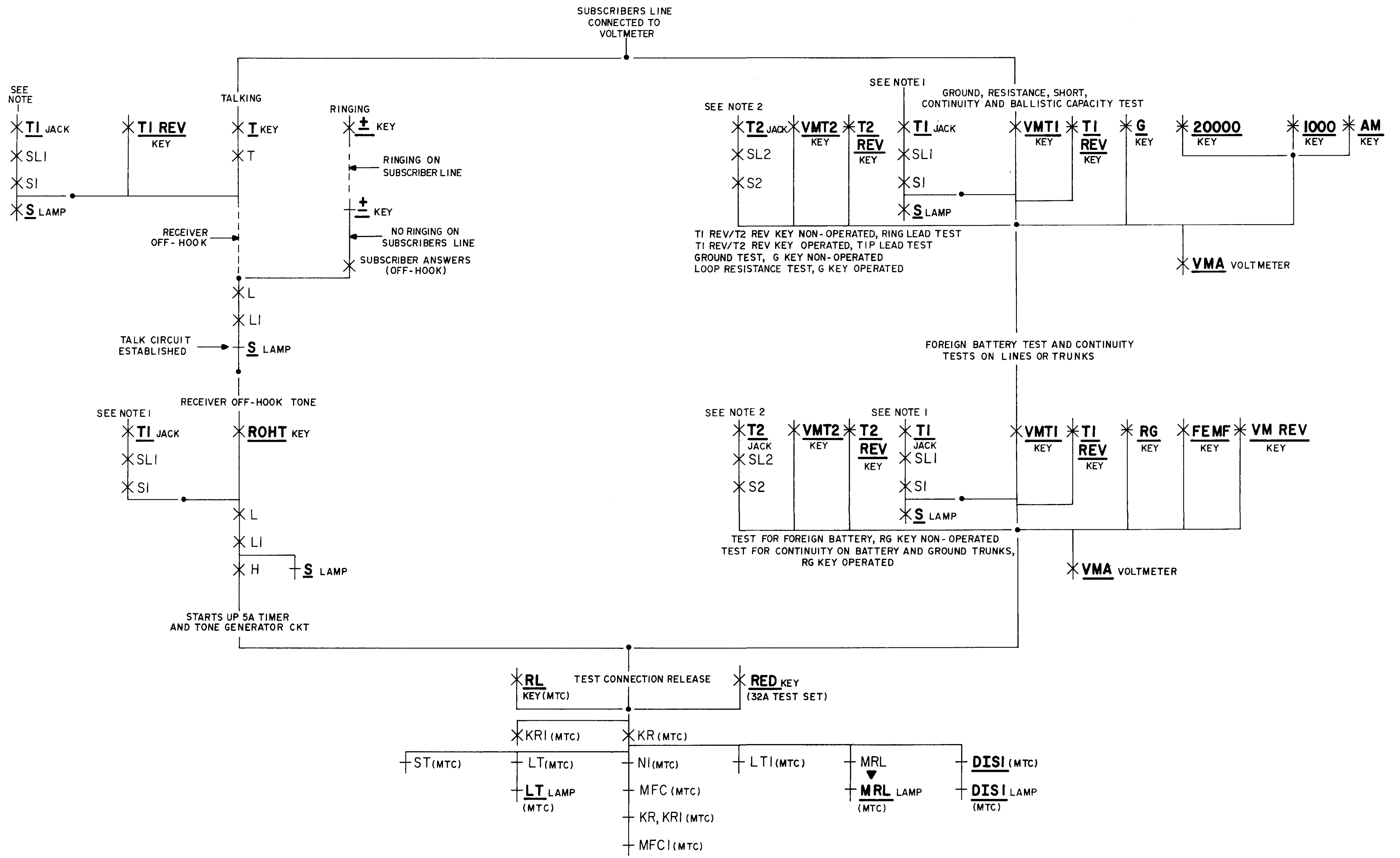

SHEET NOTES:

1. PATCH (T1) JACK TO PLUGGING-UP LINE CIRCUIT, PERMANENT SIGNAL HOLDING TRUNK CIRCUIT, OR COMMON OVERFLOW TRUNK CIRCUIT.
2. PATCH (T2) JACK TO (T) JACK OF TRUNK CIRCUIT ASSOCIATED WITH OUTGOING TRUNK BEING TESTED.

ISSUE
5

SFD-10-01-N006

SEQUENCE CHART
VOLTMETER TESTS SUBSCRIBER LINES
OR TRUNKS

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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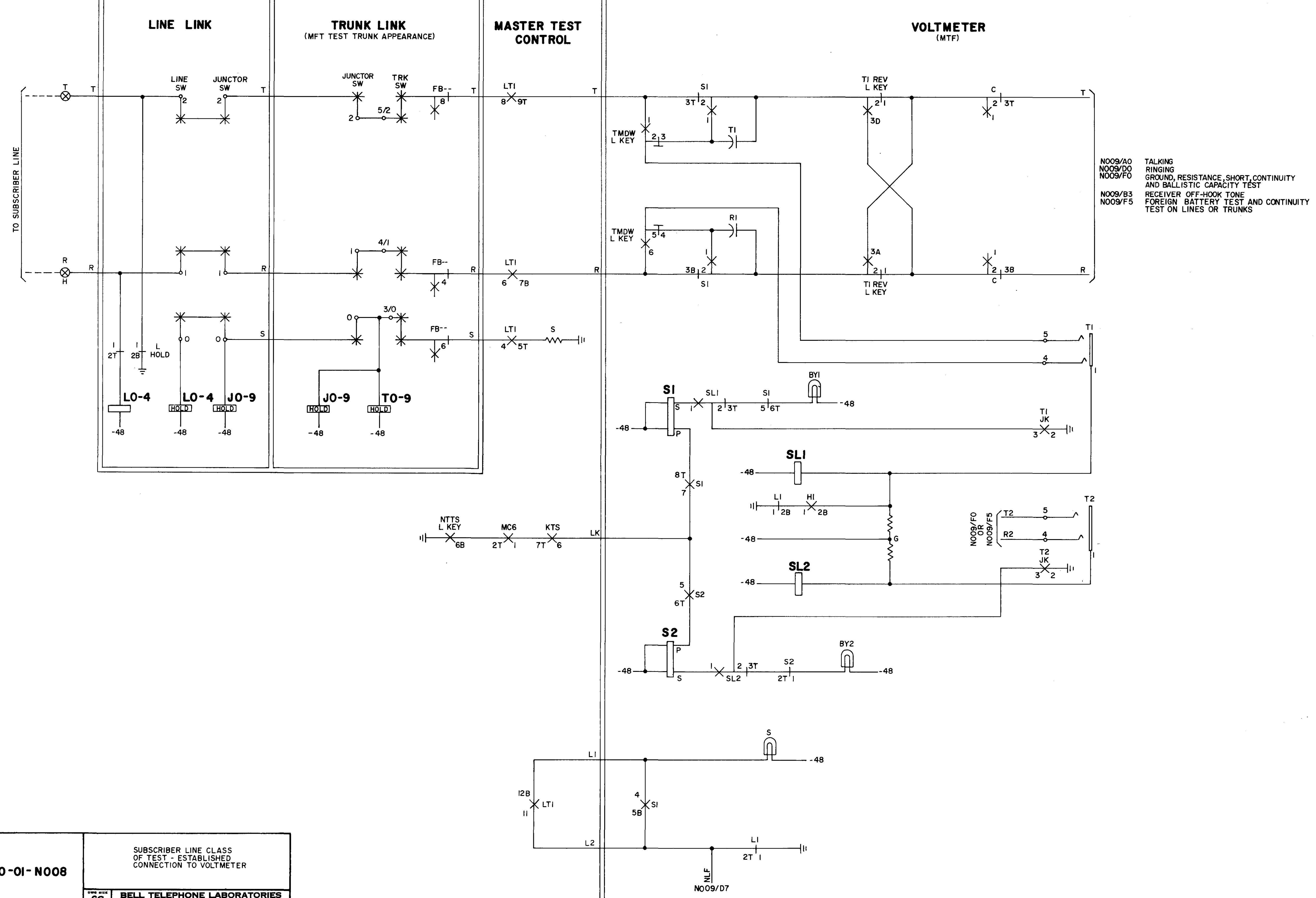
E-7481-L (4-73)

SFD-10-01-N006



N009/A0	TALKING
N009/D0	RINGING
N009/F0	GROUND, RESISTANCE, SHORT, CONTINUITY AND BALLISTIC CAPACITY TEST
N009/B3	RECEIVER OFF-HOOK TONE
N009/F5	FOREIGN BATTERY TEST AND CONTINUITY TEST ON LINES OR TRUNKS

ISSUE
5

SFD-10-01-N008

SUBSCRIBER LINE CLASS
OF TEST - ESTABLISHED
CONNECTION TO VOLTMETER

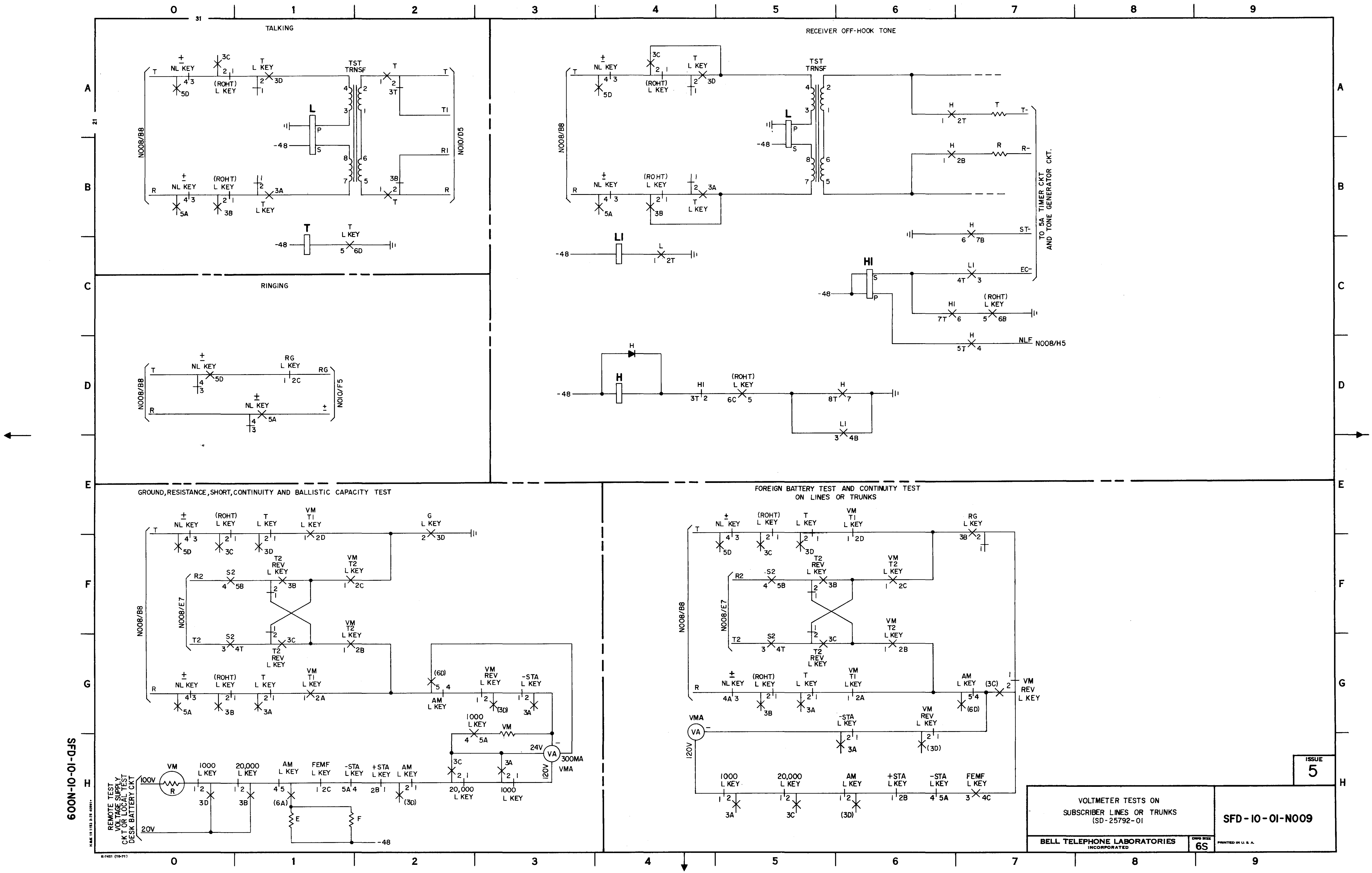
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-72)

SFD-10-01-N008



VOLTMETER TESTS ON
SUBSCRIBER LINES OR TRUNKS
(SD-25792-01)

SFD-10-01-N009

BELL TELEPHONE LABORATORIES
INCORPORATED

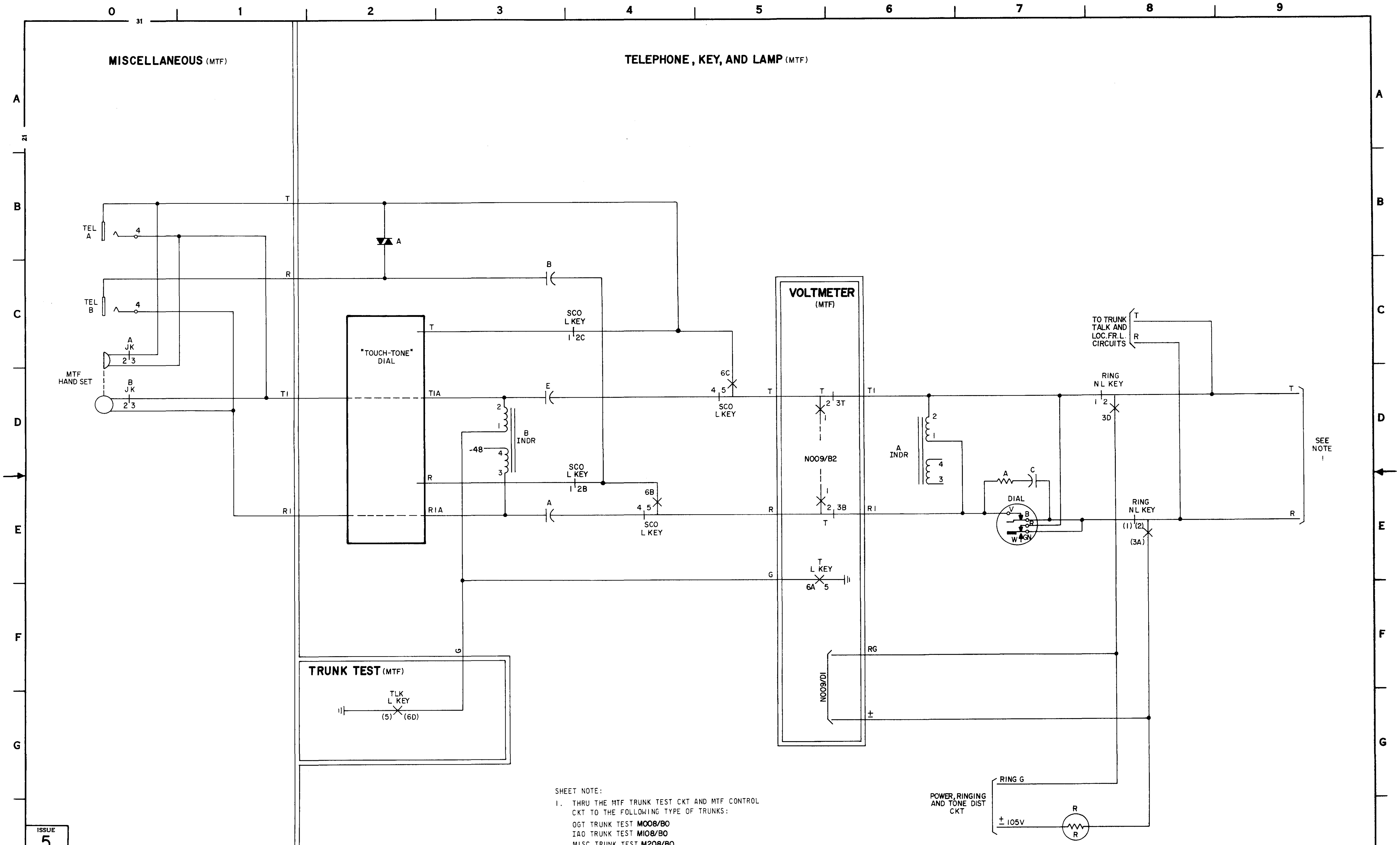
DWG SIZE 6S

PRINTED IN U.S.A.

ISSUE
5

SFD-10-01-N009

E-7421 (10-71)



SHEET NOTE:

1. THRU THE MTF TRUNK TEST CKT AND MTF CONTROL CKT TO THE FOLLOWING TYPE OF TRUNKS:
   OGT TRUNK TEST M008/B0
   IAO TRUNK TEST M108/B0
   MISC TRUNK TEST M208/B0
   ITDO TRUNK TEST M308/B0
   ITNP TRUNK TEST M409/F9
   MISC TRUNK TEST (LOOP-AROUND TRANSMISSION) M210/B0,F0
   IMG TRUNK TEST M508/B0
   INC (TANDEM) TRUNK TEST M709/D8

ISSUE
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SFD-10-01-N010

MASTER TEST FRAME
TELEPHONE CIRCUIT
CONNECTION AND CONTROL

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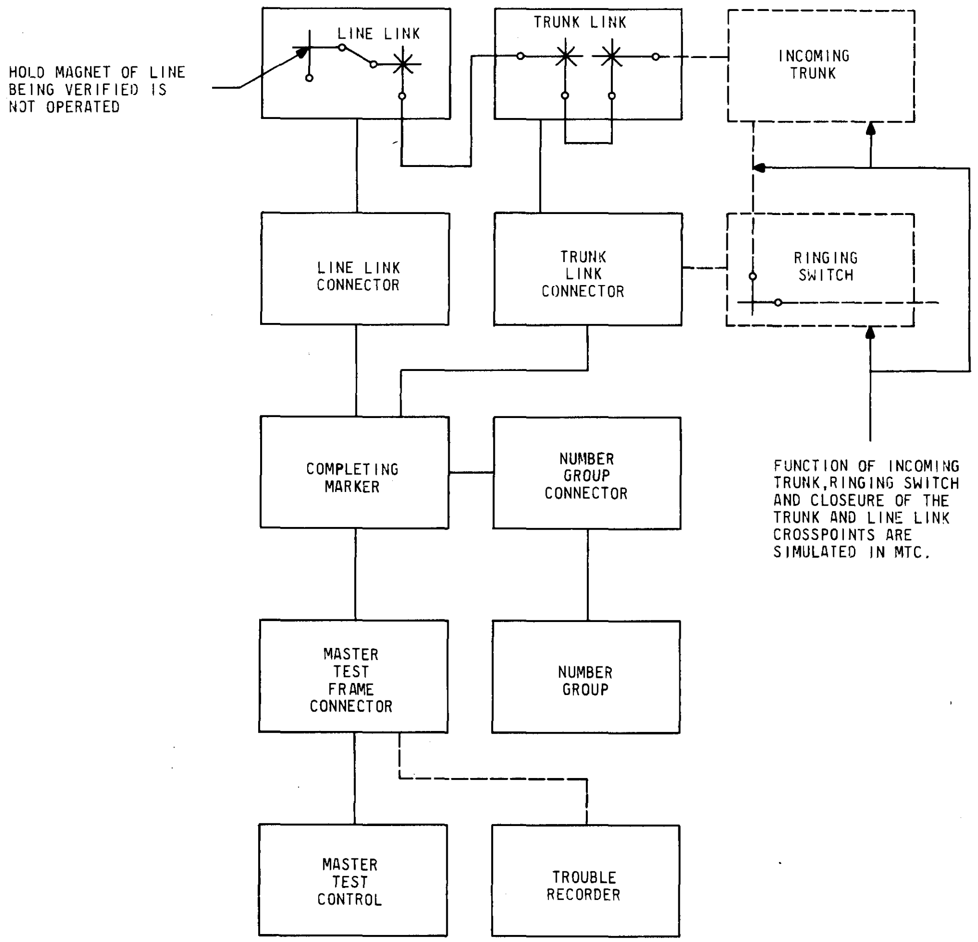
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-72)

MARKER LINE VERIFICATION (FIRST STAGE) (MLV)



HOLD MAGNET OF LINE BEING VERIFIED IS NOT OPERATED

FUNCTION OF INCOMING TRUNK, RINGING SWITCH AND CLOSEURE OF THE TRUNK AND LINE LINK CROSSPOINTS ARE SIMULATED IN MTC.

INDEX

PAGE NO	TITLE
N101	PART N1 MARKER LINE VERIFICATION TEST
N102	TEST FRAME SET-UP - MARKER LINE VERIFICATION TEST (MLV)
N103	RESERVED
N104	SEQUENCE CHART - MLV CLASS OF TEST
N105	SEQUENCE CHART - MLV CLASS OF TEST
N106	SEQUENCE CHART - MLV CLASS OF TEST
N107	LINE VERIFICATION MATCH OR MISMATCH COMMON CONTROL RELAYS
N108	NUMBER GROUP TRANSLATION
N109	LINE VERIFICATION MATCH
N110	LINE LOCATION CONTROL
N111	20,30,60 CLASSES OF SERVICE LINE VERIFICATION TEST AND INPUT TO COMPLETING MARKER
N112	100 CLASSES OF SERVICE LINE VERIFICATION TEST AND INPUT TO COMPLETING MARKER

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART N1
MARKER LINE
VERIFICATION TEST
(FIRST STAGE) (MLV)

SFD-10-01-N101

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

E-7421 (10-71)

LINE VERIFICATION
TESTS USING MASTER TEST FRAME

	FEATURE OR EQUIPMENT TO BE TESTED	B.S.P.	PAR
1	VERIFICATION OF LINES NOT ARRANGED FOR PBX, TERMINAL HUNTING, OR INTERCEPT OPERATION	218-102-501	A
2	VERIFICATION OF LINES ARRANGED FOR PBX OR TERMINAL HUNTING	218-102-501	B
3	SLEEVE LEAD CROSS-CONNECTION	218-102-501	C
4	NUMBER GROUP END-OF-GROUP CROSS-CONNECTION LAST LINE OF A TERMINAL HUNTING GROUP	218-102-501	D

BSP 218-102-501
SD-25800-01 MASTER TEST CONTROL CIRCUIT (MTC)

SHEET NOTES

1. KEY(S) OR SWITCH(ES) THAT MUST BE OPERATED TO PERFORM THIS CLASS OF TEST.
2. KEY(S) OR SWITCH(ES) USED TO SIMULATE TROUBLE RECORD. (SEE SFD-D902/D904/D906)
3. KEY(S) OR SWITCH(ES) WHICH MAY BE OPERATED TO CAUSE ADDITIONAL ACTIONS OR TEST VARIATIONS FOR THIS PARTICULAR TEST.

SD-25800-01

SEE NOTE	FIG.OR OPT	KEY OR SWITCH	FUNCTION
1	68	MLV KEY	MARKER LINE VERIFICATION CAUSES THE TEST CIRCUIT TO CONNECT TO A MARKER WITH THE NUMBER OF THE LINE TO BE VERIFIED.
	74	TSTB SW (MLV)	
1,2	11, ZVP	IC KEY (OA/OAT/ OB/OBT)	INCOMING CLASS OPERATED CONTROLS THE INCOMING CLASS TRANSMITTED TO THE MARKER.
	11,CY	IC SW (OA/OAT/ OB/OBT)	
	11,NQ, ZE	ICL SW (INC)	
		TRNB SW (OA/OB)	
		THC KEY	THC KEY SIGNALS THE MARKER TO COMPLETE TO A THEORETICAL OFFICE WHEN THE TRNB SW IS IN THE OA OR OB POSITION
1,2	11,PA, PB,PC	E KEY	EXTRA THEORETICAL USED IN CONJUNCTION WITH THE INCOMING CLASS KEYS OR SWITCHES FOR EXTRA THEORETICAL NUMBERS IN THE A OR B OFFICE.
	11,NQ	ETHC KEY	
		NONE	EXTRA THEORETICAL NUMBERS NOT USED.
1	19,21	MT (0-1) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE SPECIAL MARKER SELECTED.
	52	MT SW (0,1)	
	81	MTU SW (0-1)	
1,2	4,KX	A-D (0-9) KEY	DIGITS OPERATE KEYS OR SWITCHES AS NECESSARY FOR LINE TO BE VERIFIED.
	4,ZVL	A-D SW (0-9)	
1,2	FIG.S	FT (0-3) KEY	FRAME TENS OPERATED TO TRANSMIT THE LINE LINK FRAME TENS DIGIT TO THE MARKER.
	FIG.T	FT (0-5) KEY	
	78	FT SW (0-5)	
1,2	6,KX,	FU (0-9) KEY	FRAME UNITS OPERATED TO TRANSMIT THE LINE LINK FRAME UNITS DIGIT TO THE MARKER.
	6,ZWP, ZWQ	FU SW (0-9)	
1,2	6,KX	VG (0-9) KEY	VERTICAL GROUP OPERATED TO TRANSMIT THE VERTICAL GROUP TO THE MARKER.
	6,ZF	VG (10-13) KEY	
	6,JF	VGU SW (0-9)	
		VGTI KEY	

SD-25800-01

SEE NOTE	FIG.OR OPT	KEY OR SWITCH	FUNCTION
1,2	6,KX	HG (0-9) KEY	HORIZONTAL GROUP OPERATED TO TRANSMIT THE HORIZONTAL GROUP TO THE MARKER.
	6,JF	HG SW (0-9)	
1,2	6,RD	VF (0-4) KEY	VERTICAL FILE OPERATED TO TRANSMIT THE VERTICAL FILE TO THE MARKER.
	6,JF	VF SW (0-4)	
1,2	7,XA, XB,ZG	CST (0-2) KEY	CLASS OF SERVICE TENS CONTROLS THE CLASS-OF-SERVICE TENS DIGITS TRANSMITTED TO THE MARKER.
	7,XB	CST (0-9) KEY	
	7,JF	CST SW (0-9)	
1,2	7,JH RY	CSU (0-9) KEY	CLASS OF SERVICE UNITS CONTROLS THE CLASS-OF-SERVICE UNITS DIGIT TRANSMITTED TO THE MARKER
	7,JF	CSU SW (0-9)	
1,2	37, GC,GD	CGB KEY (OPR/N-OPR)	CLASS GROUP B USED WHEN OFFICE HAS A MAXIMUM OF 60 CLASSES OF SERVICE. SELECTS CLASS GROUP A WITH KEY IN NORMAL POSITION.
		NONE	
1,2	7,JI	CRU (0-9) KEY	CUSTOMER RATE TREATMENT UNITS PROVIDES RATE TREATMENT INFORMATION TO MARKER.
	7,JF	CRU SW (0-9)	
		NONE	NO RATE TREATMENT REQUIRED
1,2	7,ED	CGSA/ CGSB KEY	RATE TREATMENT GROUP A AND B CONTROLS THE RATE TREATMENT GROUP INDICATION TO MARKER.
		NONE	NO RATE TREATMENT REQUIRED
1,2	7,RB	RC KEY (1-15)	RINGING COMBINATION MATCH THE RINGING COMBINATION RECEIVED BY THE MARKER FROM THE NUMBER GROUP.
	7,RC	RC KEY (1-10)	
		OTRC KEY	
	7,JF	RCU SW (1-10)	
	7,ZYH, ZYI	RCTI KEY	
1	1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.
3	1	REC KEY	RECORD CAUSES THE MARKER TO REQUEST A TROUBLE RECORD OF THE TEST CALL BEFORE IT RELEASES.

ISSUE
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SFD-10-01-N102

TEST FRAME SET-UP
MARKER LINE VERIFICATION TEST
(MLV)

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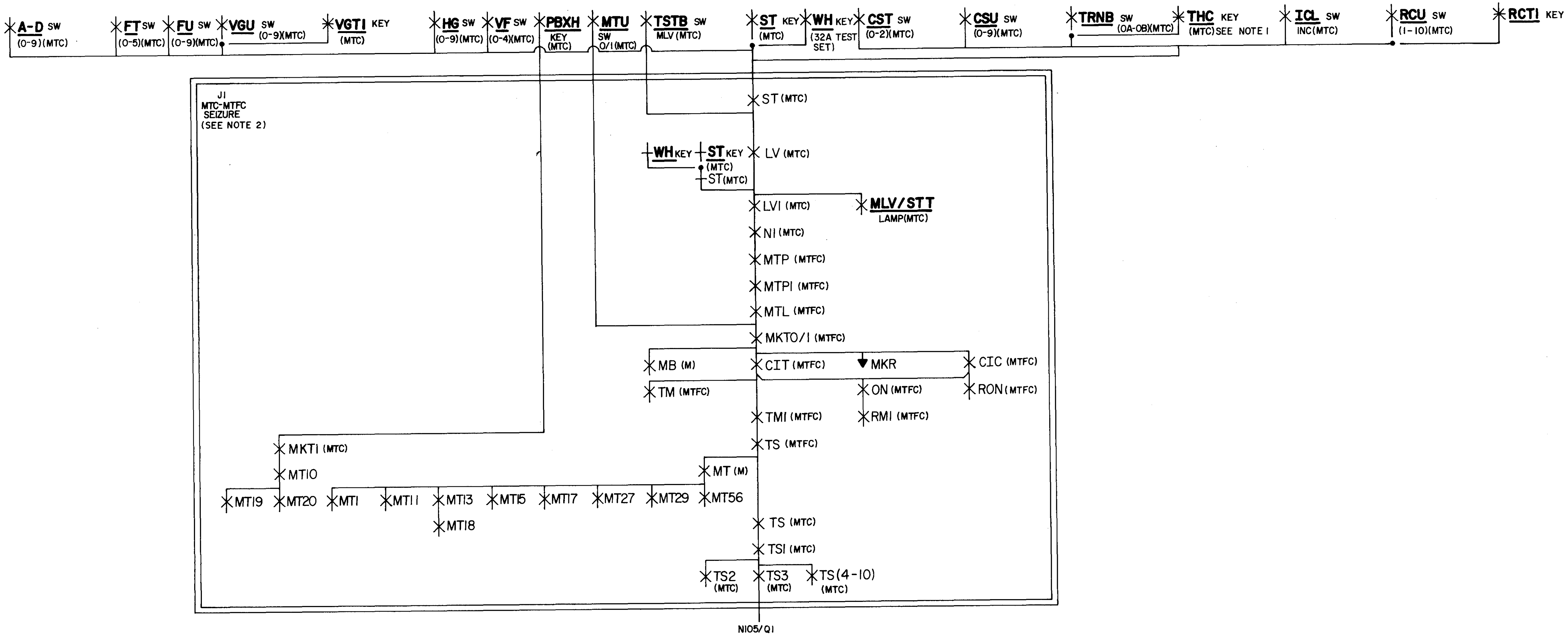
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

MARKER LINE VERIFICATION TEST

(FIRST STAGE)(MLV)



SHEET NOTES:

1. (THC) KEY OPERATED WITH TRNB SW (OA/OB) INDICATES (OAT/OBT) THEORETICAL OFFICE.
2. THE SC SHOWN IN THIS DOUBLE LINE BOX IS COMPLETE FOR THE MARKER LINE VERIFICATION TEST. THE CIRCUIT PATHS FOR THE APPARATUS IN THE DOUBLE LINE BOX ARE SHOWN IN THE J1 PART.

ISSUE	5
SFD-10-01-N104	SEQUENCE CHART MARKER LINE VERIFICATION TEST (FIRST STAGE) (MLV)
DWG SIZE 6S	BELL TELEPHONE LABORATORIES INCORPORATED

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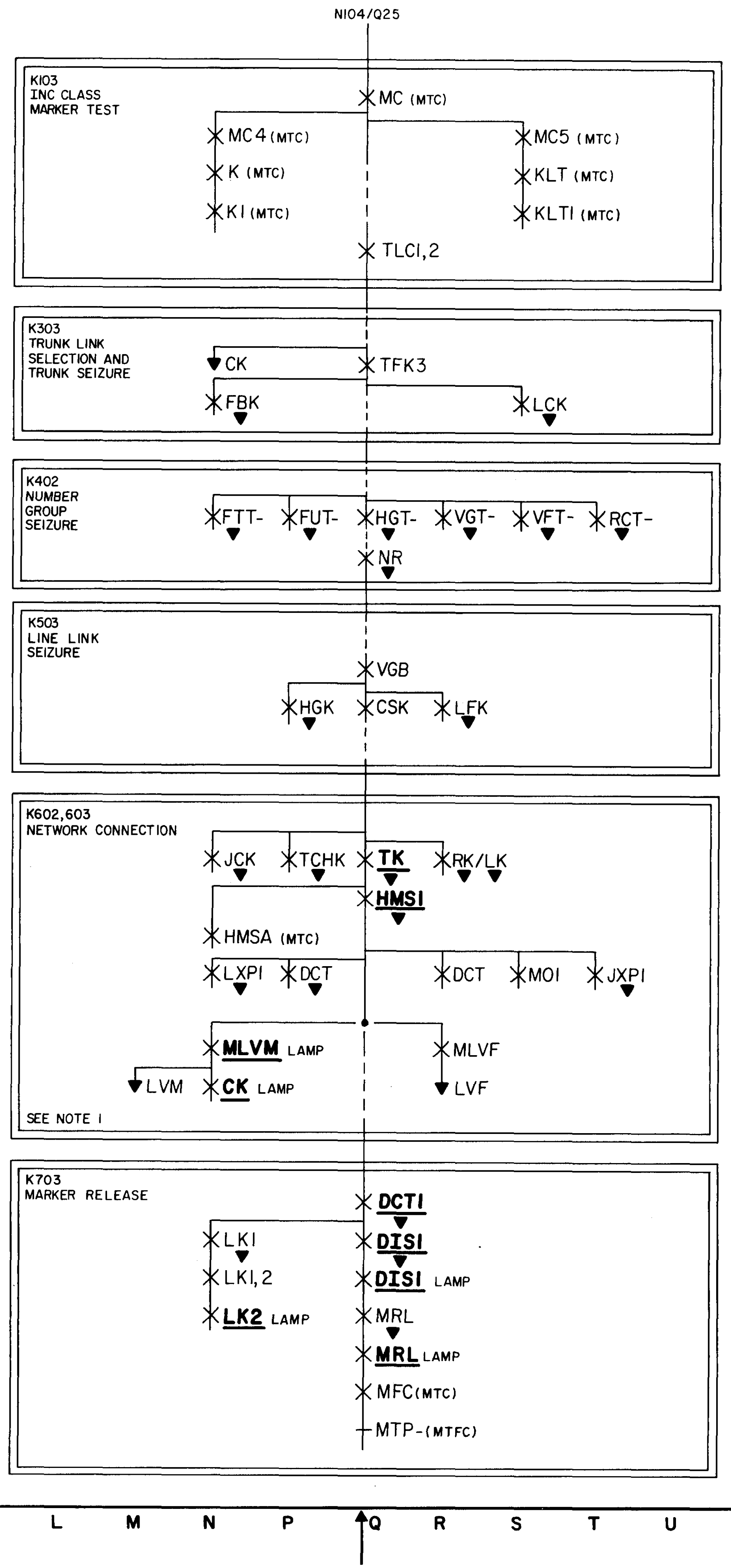
E-7481-L (4-73)



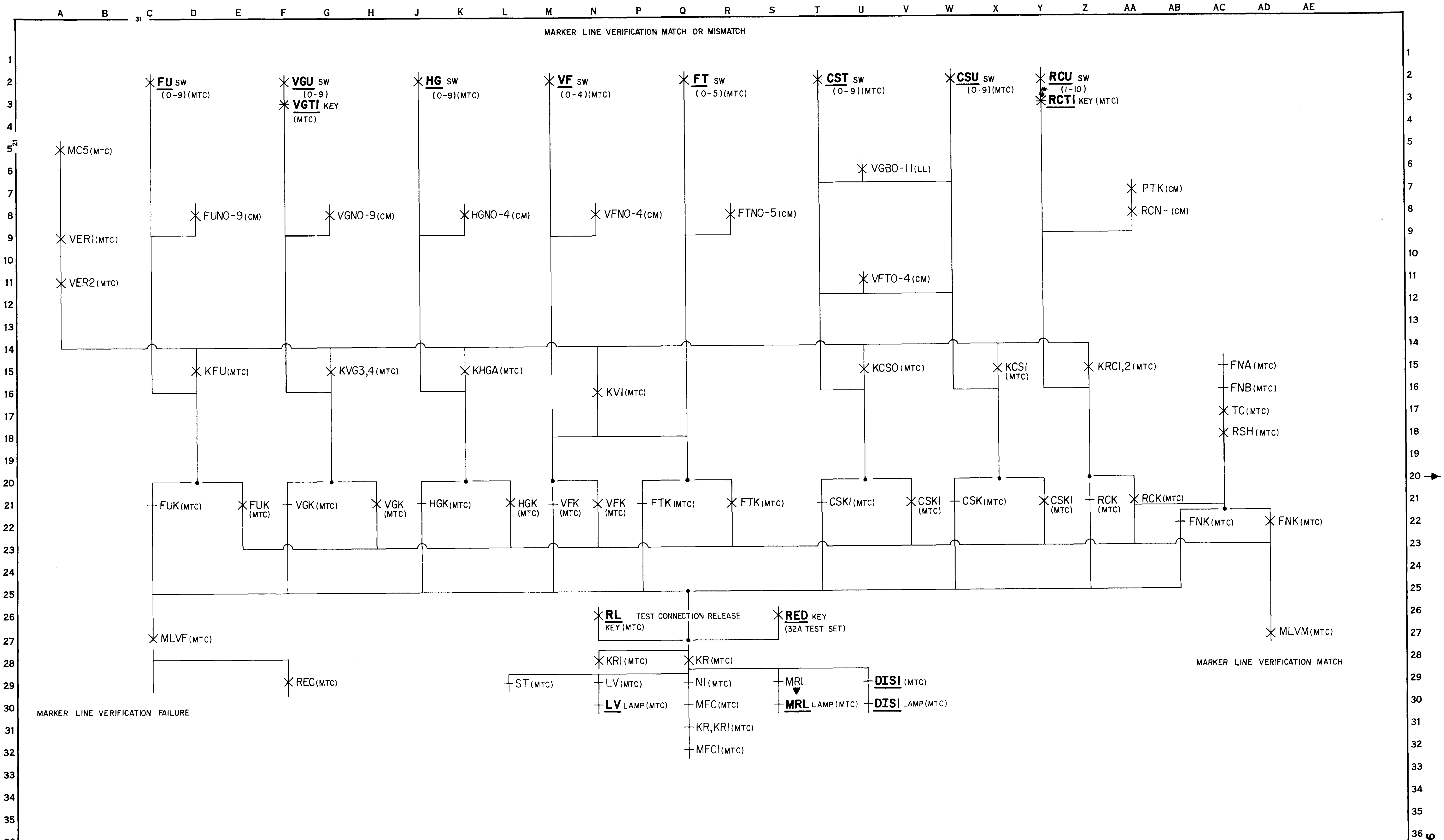
SHEET NOTES:
I. MLVF LAMP LIGHTED INSTEAD OF MLVM INDICATES A FAILURE IN VERIFYING LINE CROSS-CONNECTIONS ON THE LINE LINK OR NUMBER GROUP FRAMES.

SEQUENCE CHART
MARKER LINE VERIFICATION
TEST (MLV)

		DWG SIZE 6S	ISSUE 5
BELL LABORATORIES	SFD-10-01-		N105

BRUNING 44-131 28142

E-7421-B (6-75) PRINTED IN U.S.A.



ISSUE
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SFD-10-01-N106

SEQUENCE CHART
MARKER LINE VERIFICATION (MLV)
MATCH/MISMATCH
(FIRST STAGE)

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DWG SIZE
6S

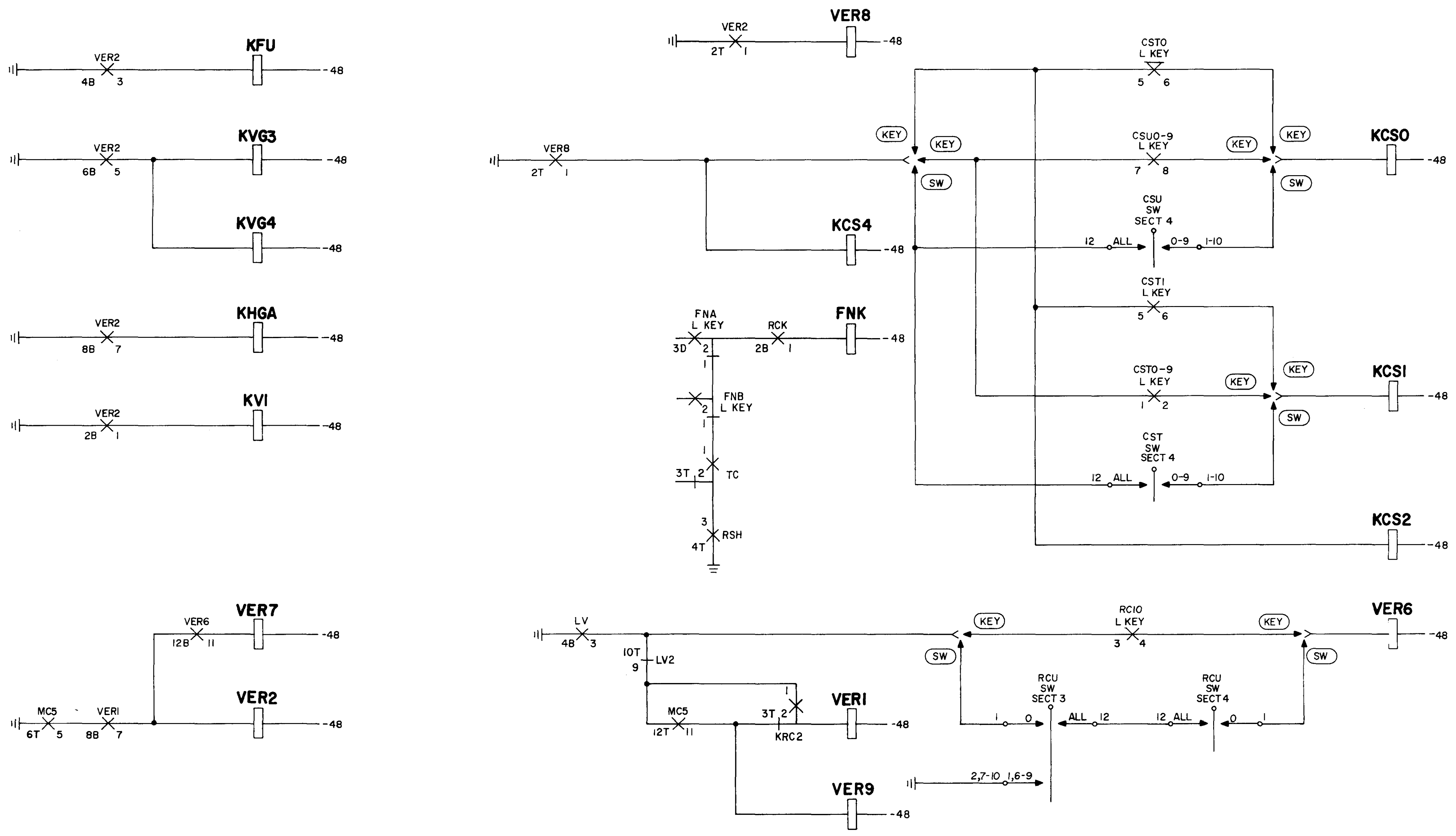
BELL TELEPHONE LABORATORIES
INCORPORATED

E-7431-B (10-71)

BRUNING 44-131 24092

SFD-10-01-N106

MASTER TEST CONTROL



ISSUE
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LINE VERIFICATION
MATCH OR MISMATCH
COMMON CONTROL RELAYS

SFD-10-01-N107

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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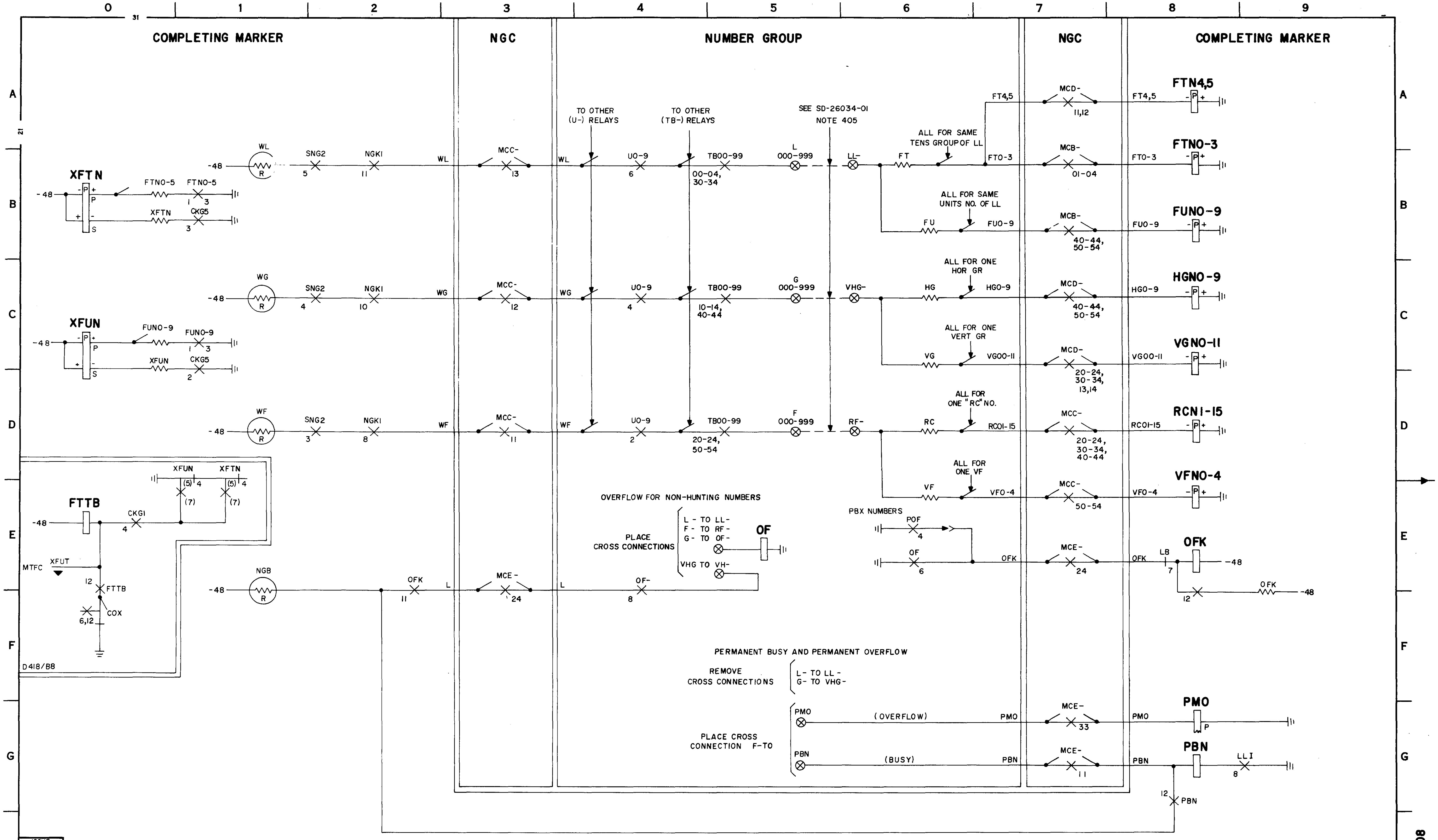
SFD-10-01-N107



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5

SFD-10-01-N108

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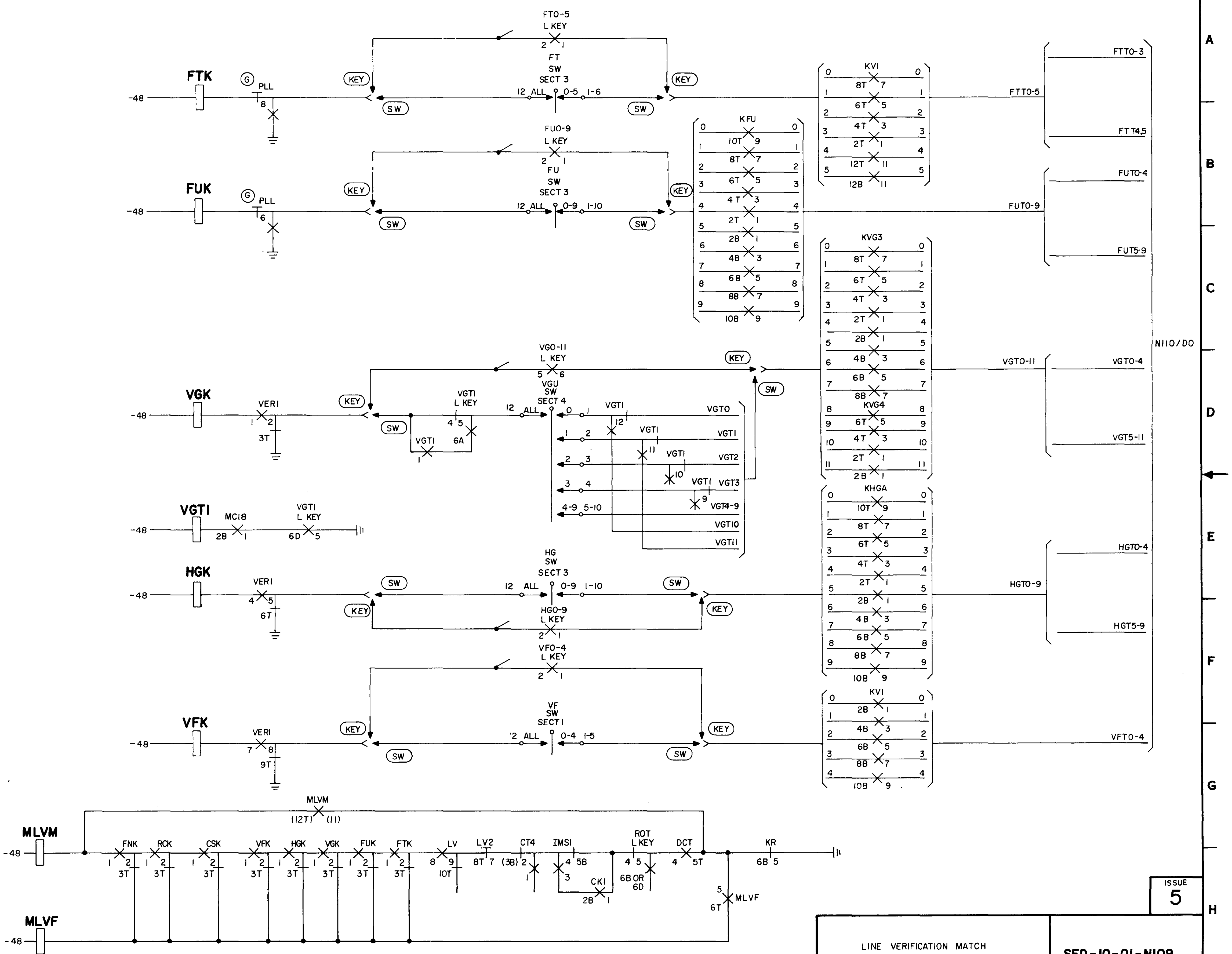
NUMBER GROUP
TRANSLATION

DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

SFD-10-01-N108

MASTER TEST CONTROL



SHEET NOTES:
1. OPTION ASSIGNMENT:
Ⓖ PAIRED LINE LINK FRAMES

ISSUE
5

LINE VERIFICATION MATCH

SFD-10-01-N109

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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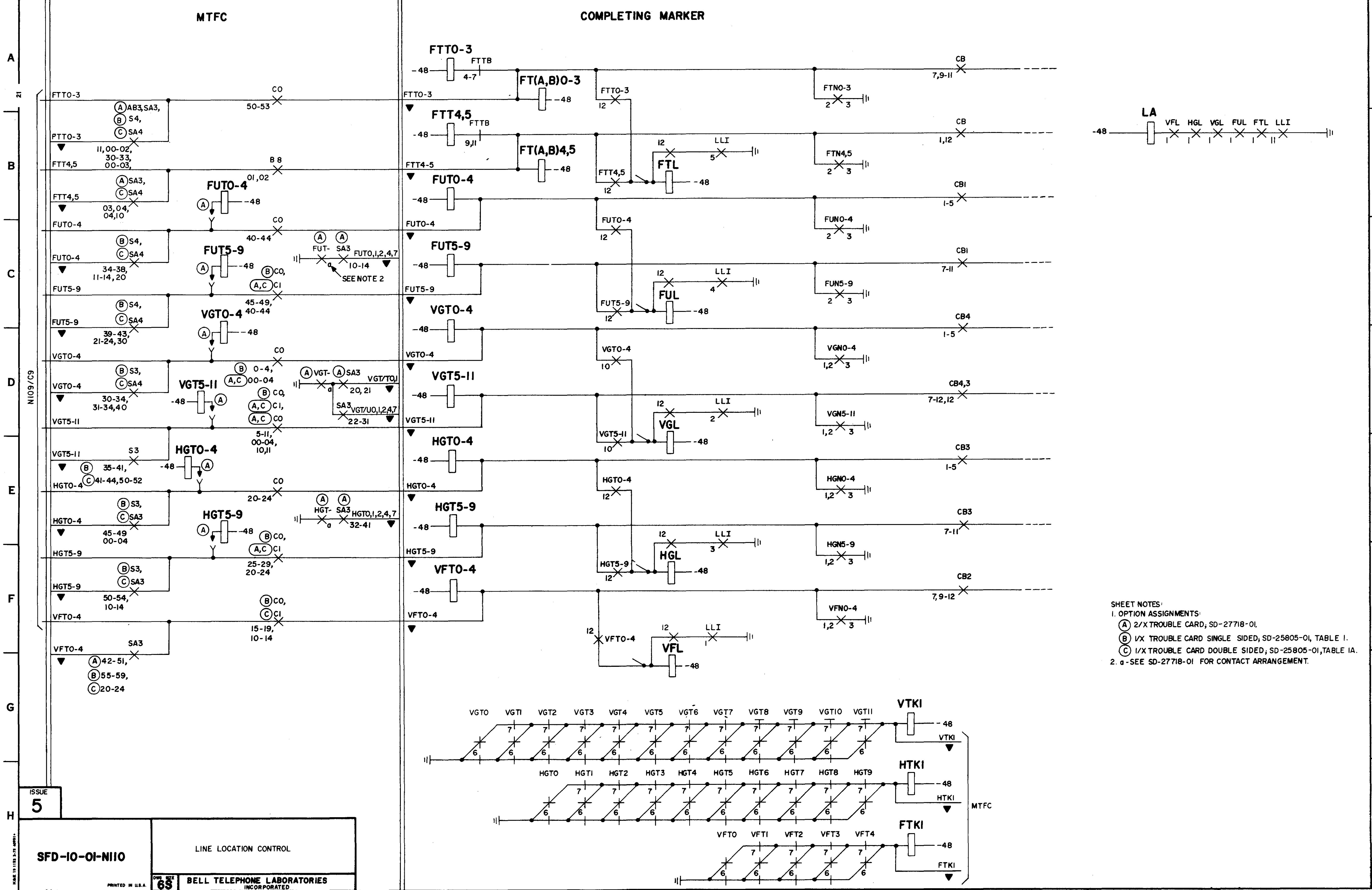
SFD-10-01-N109



SHEET NOTES:
1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
2. a-SEE SD-27718-01 FOR CONTACT ARRANGEMENT.

ISSUE
5

SFD-10-01-N110

LINE LOCATION CONTROL

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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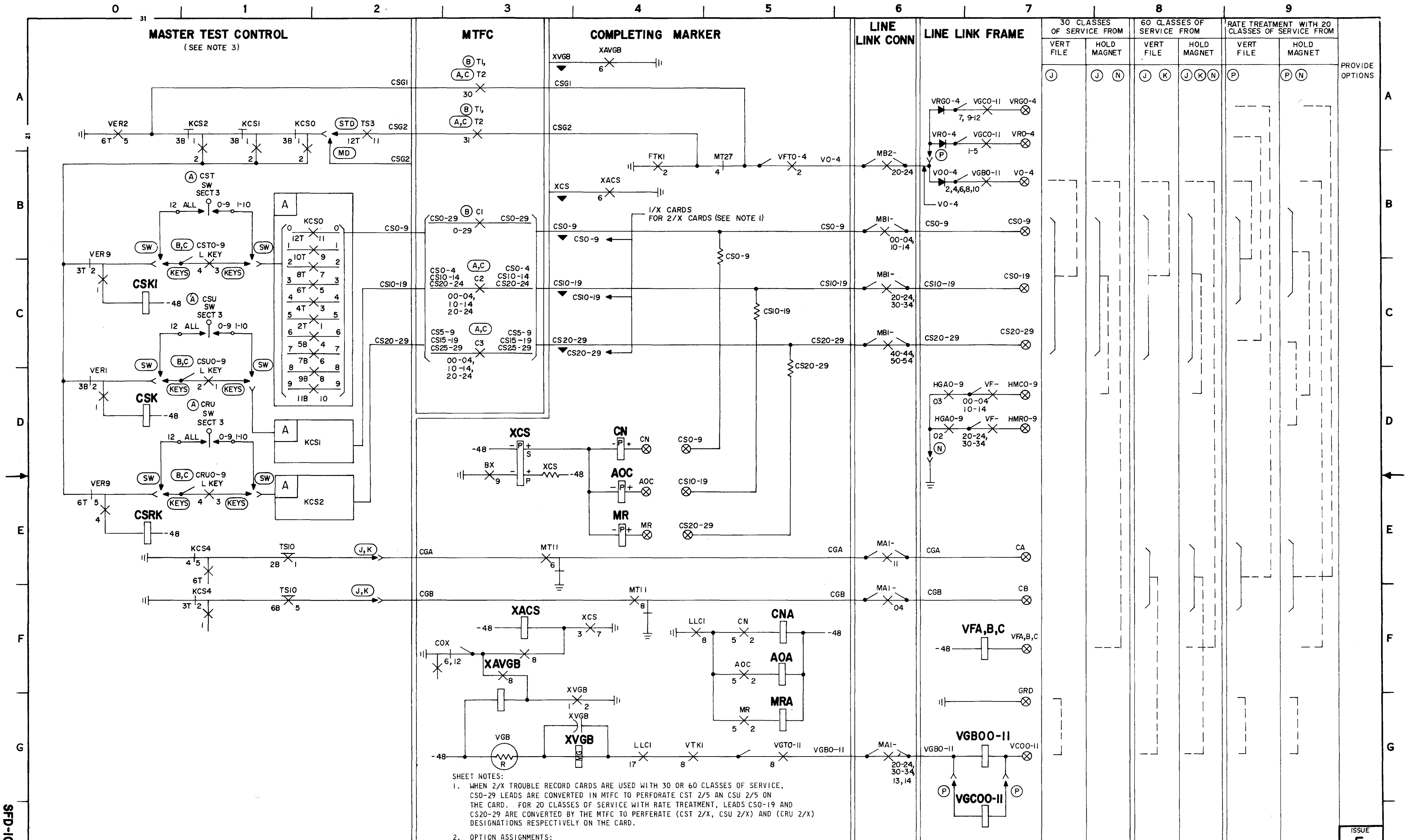
E-7421 (10-71)



SHEET NOTES:

1. WHEN 2/X TROUBLE RECORD CARDS ARE USED WITH 30 OR 60 CLASSES OF SERVICE, CS0-29 LEADS ARE CONVERTED IN MTFC TO PERFORATE CST 2/5 AN CSU 2/5 ON THE CARD. FOR 20 CLASSES OF SERVICE WITH RATE TREATMENT, LEADS CS0-19 AND CS20-29 ARE CONVERTED BY THE MTFC TO PERFERATE (CST 2/X, CSU 2/X) AND (CRU 2/X) DESIGNATIONS RESPECTIVELY ON THE CARD.

2. OPTION ASSIGNMENTS:

   - Ⓐ 2/X TROUBLE; SD-27718-01.
   - Ⓑ 1/X SINGLE SIDED TROUBLE CARD; SD-25805-01, TABLE 1.
   - Ⓒ 1/X DOUBLE SIDED TROUBLE CARD; SD-25805-01, TABLE 1A.
   - Ⓙ 30 CLASSES OF SERVICE
   - Ⓚ 60 CLASSES OF SERVICE
   - Ⓝ CLASSES OF SERVICE ON A HOLD MAGNET BASIS WITHIN A VERTICAL FILE
   - Ⓟ 20 CLASSES OF SERVICE WITH RATE TREATMENT.

3. FOR DETAILED UNDERSTANDING OF THE OPERATION OF KEYS, SWITCHES, AND RELAYS SEE SFD-10-01-SECTION J.

ISSUE
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20,30,60 CLASSES OF SERVICE LINE VERIFICATION
TEST AND INPUT TO COMPLETING MARKER

SFD-10-01-N111

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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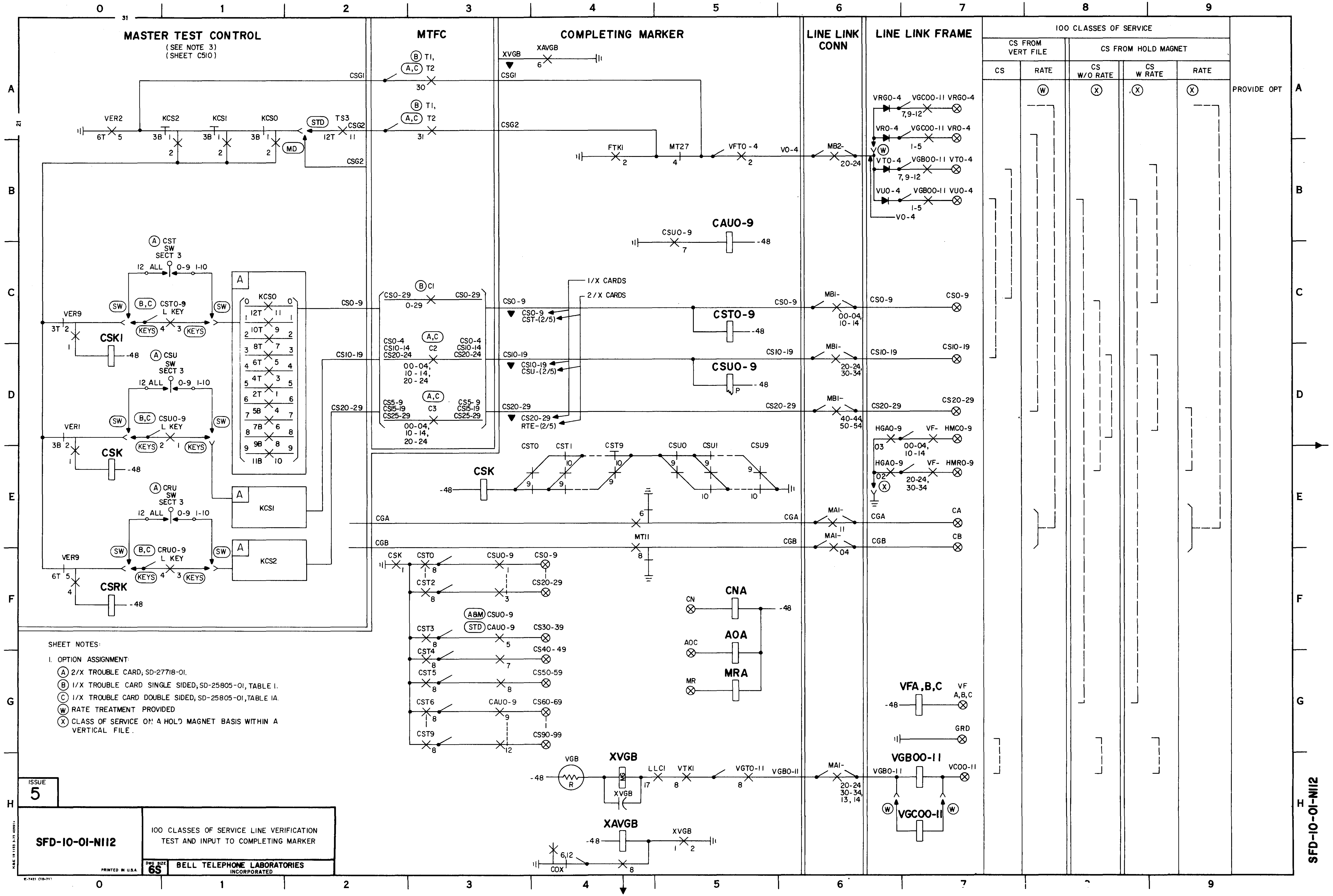

SHEET NOTES:

1. OPTION ASSIGNMENT:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01.
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A.
   - Ⓦ RATE TREATMENT PROVIDED
   - Ⓧ CLASS OF SERVICE ON A HOLD MAGNET BASIS WITHIN A VERTICAL FILE.

ISSUE
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SFD-10-01-N112

100 CLASSES OF SERVICE LINE VERIFICATION
TEST AND INPUT TO COMPLETING MARKER

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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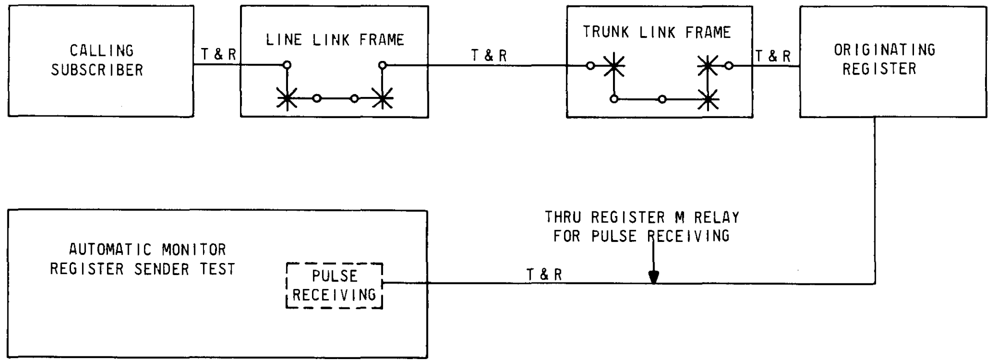
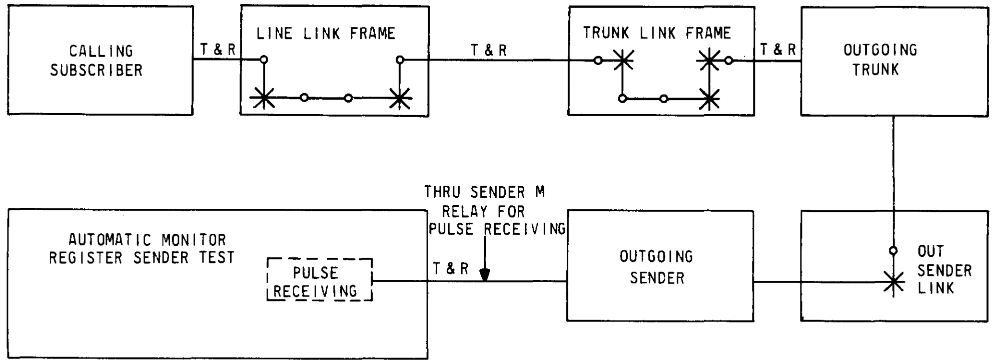
K&E 19 1153 3-73 40991

E-7421 (10-71)

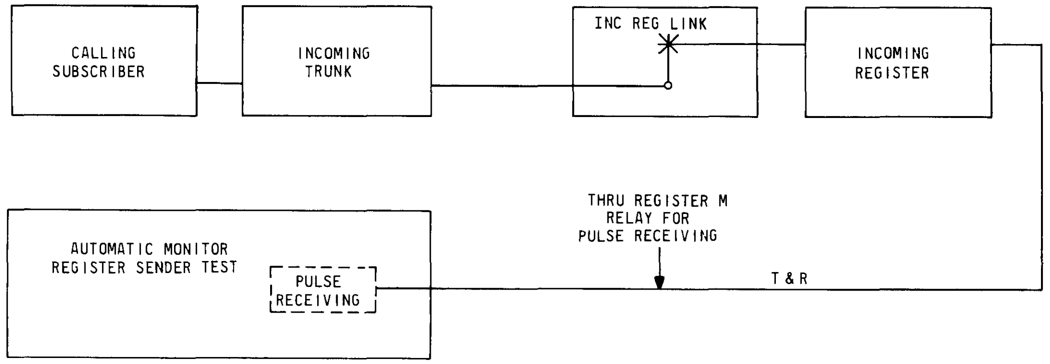
MONITORING ORIGINATING REGISTERS



MONITORING OUTGOING SENDERS



MONITORING INCOMING REGISTERS



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PAGE NO.	TITLE
P001	PART PO-AMRST-TEST FRAME PREPARATIONS
P002	AMRST-TEST FRAME PREPARATIONS FOR PROGRESSIVE MONITORING, MONTORING OR, IR, OS. MONITORING A PARTICULAR IR, OS.
P003	AMRST-TEST FRAME PREPARATION FOR MONITORING A PARTICULAR OR.

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

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AMRST
TEST FRAME PREPARATIONS

SFD-10-01-P001

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

PROGRESSIVE MONITORING

SD-25680-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	13	MAC	MONITORING AC; PROVIDES FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES.
	1	STM	START MONITORING; OPERATED TO START MONITORING

SD-25680-01

MONITORING ORIGINATING REGISTER (MOR)

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	13	MAC	MONITORING AC; PROVIDED FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES.
	2	MOR	MONITORING ORIGINATING REGISTER; PROVIDES FOR MONITORING ON ORIGINATING REGISTERS ONLY
	1	STM	START MONITORING; OPERATED TO START MONITORING

SD-25680-01

MONITORING OUTGOING SENDERS (MOS)

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	13	MAC	MONITOR AC; PROVIDES FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES
	2	MOS	MONITOR OUTGOING SENDERS; PROVIDES FOR MONITORING OUTGOING SENDERS ONLY
	1	STM	START MONITORING; OPERATED TO START MONITORING

SD-25680-01

MONITORING INCOMING REGISTER (MIR)

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	13	MAC	MONITOR AC; PROVIDES FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES
	2	MIR	MONITOR INCOMING REGISTER; PROVIDES FOR MONITORING ON REGISTER ONLY
	1	STM	START MONITORING; OPERATED TO START MONITORING

MONITOR A PARTICULAR INCOMING REGISTER (MPIR)

SD-25680-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	13	MAC	MONITOR AC; PROVIDES FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES.
	2	MPIR	MONITOR PARTICULAR INCOMING REGISTERS; PROVIDES FOR REPEAT MONITORING ON A PARTICULAR INCOMING REGISTER.
	J	IG (0-14L KEY	INCOMING REGISTER GROUP; OPERATED TO SELECT AN INCOMING REGISTER LINK GROUP FOR TEST OR MONITORING.
	K	IRG SW (0-14)	
	AG	IRG SW (0-9)	
	67	IRGT KEY	
	23	SRS (0-9) KEY	SENDER OR REGISTER SELECTION; SELECTS A PARTICULAR INCOMING REGISTER FOR MONITORING.
	42	SRS SW (0-9)	
	1	STM	START MONITORING; OPERATED TO START MONITORING

MONITORING A PARTICULAR OUTGOING SENDER (MPOS)

SD-25680-01

SEE NOTE	FIG OR OPT	KEY OR SWITCH	FUNCTION
1	13	MAC	MONITOR AC; PROVIDES FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES.
	2	MPOS	MONITOR PARTICULAR OUTGOING SENDER; PROVIDES FOR REPEAT MONITORING ON A PARTICULAR OUTGOING SENDER.
	G	SG (0-10) KEY	SENDER GROUP SELECTION; SELECTS A SENDER GROUP FOR TEST OR MONITORING.
	67	SG SW (0-10) SGTI	
	23	SRS (0-9) KEY	SENDER OR REGISTER SELECTION; SELECTS A PARTICULAR OUTGOING SENDER FOR MONITORING.
	42	SRS SW (0-9)	
	1	STM	START MONITORING; OPERATED TO START MONITORING.

SHEET NOTES:

1. ALLOW 1 MINUTE FOR AUTOMATIC MONITOR TO WARM UP BEFORE OPERATING REMAINDER OF KEY'S FOR THE PARTICULAR OPERATION.

ISSUE
5

SFD-10-01-P002

AMRST
TEST FRAME PREPARATION FOR PROGRESSIVE
MONITORING,MONITORING OR,IR,OS.
MONITORING A PARTICULAR IR, OS.

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
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E-7481-L (4-73)

MONITOR A PARTICULAR ORIGINATING REGISTER (MPOR)

SD-25680-01 → FIG. OR OPT (second column); SD-25800-01 → FIG. OR OPT (third column)

SEE NOTE	FIG. OR OPT	FIG. OR OPT	KEY OR SWITCH	FUNCTION
*1	13		MAC	MONITOR AC; PROVIDES FOR ENERGIZING THE FILAMENTS OF THE MONITOR VACUUM TUBES.
		67	DT KEY	DIAL TONE CLASS OF TEST SIMULATES SEIZURE OF DTM BY LINE LINK FRAME USING MTC AND MTFC CIRCUIT.
		74	TSTA SW (DT)	
		19,21	MT (0-11) KEY	MARKER TEST DIRECTS THE MTFC TO CONNECT THIS TEST CIRCUIT (MTC) TO THE MARKER CORRESPONDING TO THE NUMBER OPERATED.
		52	MT SW (0-11)	
		81	MTU SW (0-9)	
			MTTI KEY	
		S	FT (0-3) KEY	FRAME TENS OPERATED TO TRANSMIT THE LINE LINK FRAME TENS DIGIT TO THE MARKER.
		T	FT (0-5) KEY	
		78	FT SW (0-5)	
		6,KX	FU (0-9) KEY	FRAME UNITS OPERATED TO TRANSMIT THE LINE LINK FRAME UNITS DIGIT TO THE MARKER.
		6,ZWP ZWQ	FU SW (0-9)	
		6,KX	VG (0-9) KEY	VERTICAL GROUP OPERATED TO TRANSMIT THE VERTICAL GROUP TO THE MARKER.
		6,ZF	VG (10-13) KEY	
		6,JF	VGU SW (0-9)	
			VGTI KEY	
		6,KX	HG (0-9) KEY	HORIZONTAL GROUP OPERATED TO TRANSMIT THE HORIZONTAL GROUP TO THE MARKER.
		6,JF	HG SW (0-9)	
		6,RD	VF (0-4) KEY	VERTICAL FILE OPERATED TO TRANSMIT THE VERTICAL FILE TO THE MARKER.
		6,JF	VF SW (0-4)	
		G	MF/MLF KEY (OPR/N-OPR)	ORIGINATING REGISTER GROUP WHEN THE LLF SERVES ONLY MULTIFREQUENCY ORIGINATING REGISTERS OPERATE TO MF. IF LLF SERVES BOTH MULTIFREQUENCY AND DIAL PULSE ORIGINATING REGISTERS OPERATE TO MLF.
		124	RG SW (DP/MF/MLF)	FOR LLF SERVING DIAL PULSE ORIGINATING REGISTERS MF/MLF KEY SHOULD BE NORMAL OR RG SWITCH OPERATED TO DP.

* SEE SHEET P002 FOR SHEET NOTES

SD-25680-01 → FIG. OR OPT (second column); SD-25800-01 → FIG. OR OPT (third column)

SEE NOTE	FIG. OR OPT	FIG. OR OPT	KEY OR SWITCH	FUNCTION
		U	FG (0,1) KEY	TRUNK LINK FRAME GROUP USED IN CONJUNCTION WITH THE FS(0-9) KEYS OR SWITCH WHEN THE FS OR NTFS KEYS ARE OPERATED. INDICATES TENS DIGIT OF TRUNK LINK FRAME NUMBER.
		79	FG (0-2) KEY	
		80	FG (1,2) KEY	FOR FRAME GROUP 0, THE FG KEY SHOULD BE IN THE NORMAL POSITION.
		U, 79	FS (0-9) KEY	TRUNK LINK FRAME UNITS WITH FS KEY OPERATED, MAKES ALL TRUNK LINK FRAMES EXCEPT THAT CORRESPONDING TO THE OPERATED FS(0-9) ON FG(0-2) KEYS LOOK BUSY.
		80	FS SW (0-9)	
		9,KX	TS (0-19) KEY	TRUNK SELECTION MAKES ALL TRUNKS EXCEPT ONE CORRESPONDING TO THE OPERATED TS(0-9) KEY LOOK BUSY TO THE MARKER.
		9,JF	TSU SW (0-9)	TRUNK SELECTION UNITS SAME AS (TS0-19) KEY.
			TSTI KEY	TRUNK SELECTION TENS OPERATED WITH TSU SWITCH SELECTS PARTICULAR TRUNK
	2		MPOR	MONITOR PARTICULAR ORIGINATING REGISTER; PROVIDES FOR REPEAT MONITORING ON A PARTICULAR ORIGINATING REGISTER.
	1		STM	START MONITORING; OPERATED TO START MONITORING.
		1	ST/RL KEY	START AND RELEASE OPERATED TO ST INITIATES A TEST CALL. OPERATED TO RL CAUSES TEST CALL AND ALL ASSOCIATED CIRCUITS TO RELEASE.

ISSUE
5

AMRST
TEST FRAME PREPARATION FOR
MONITORING A PARTICULAR OR.

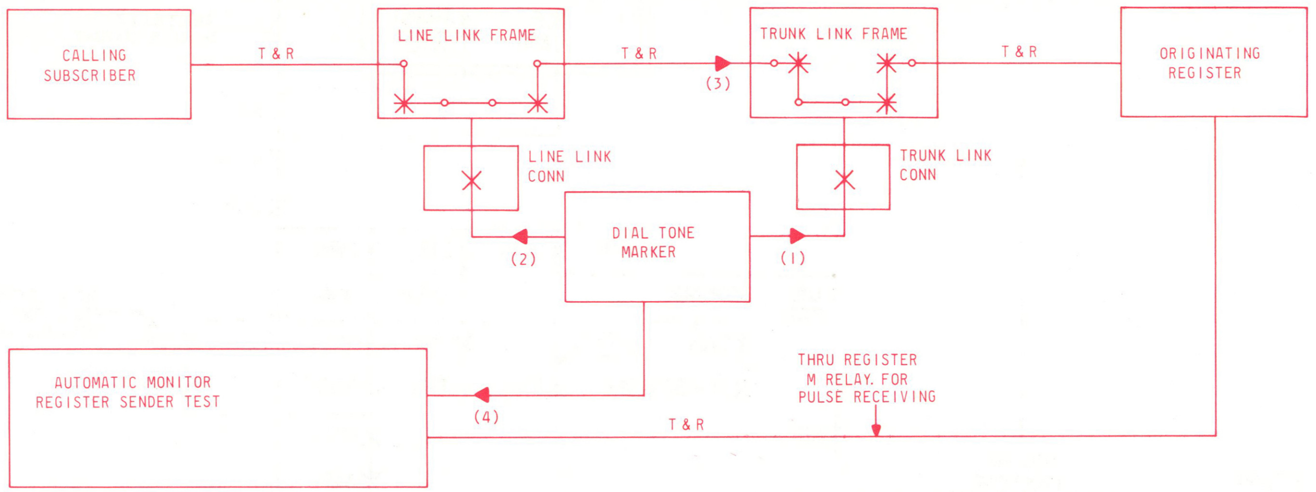
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

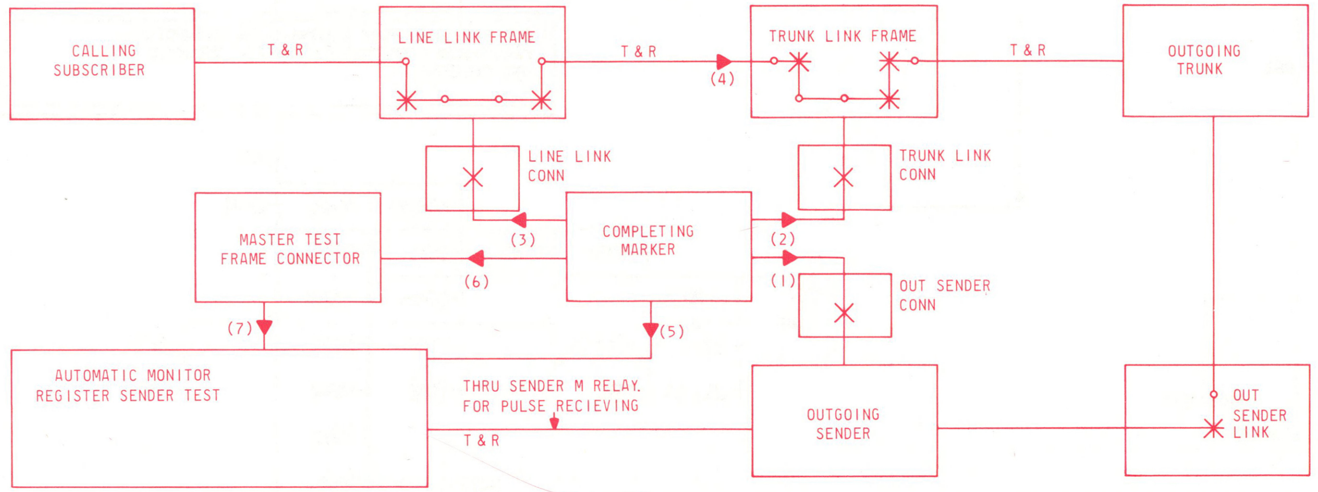
SFD-10-01-P003

PRINTED IN U. S. A.

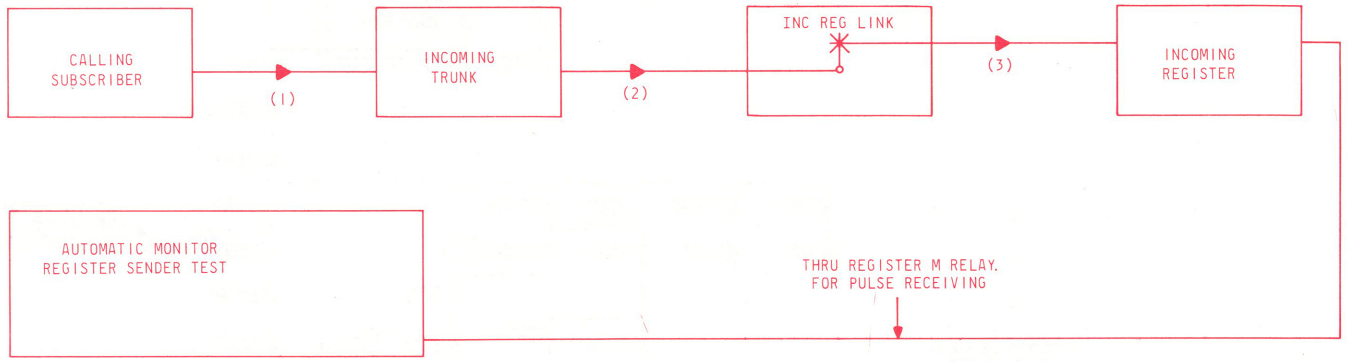
MONITORING ORIGINATING REGISTERS



MONITORING OUTGOING SENDERS



MONITORING INCOMING REGISTERS



CALLING SUBSCRIBER
(1)
INCOMING TRUNK
(2)
INC REG LINK
(3)
INCOMING REGISTER
AUTOMATIC MONITOR REGISTER SENDER TEST
THRU REGISTER M RELAY. FOR PULSE RECEIVING

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P107	SEQUENCE CHART - MONITOR PARTICULAR INCOMING REGISTER, OUTGOING SENDER - ESTABLISHING CONNECTION
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CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

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5

PART P1
ESTABLISHING CONNECTION

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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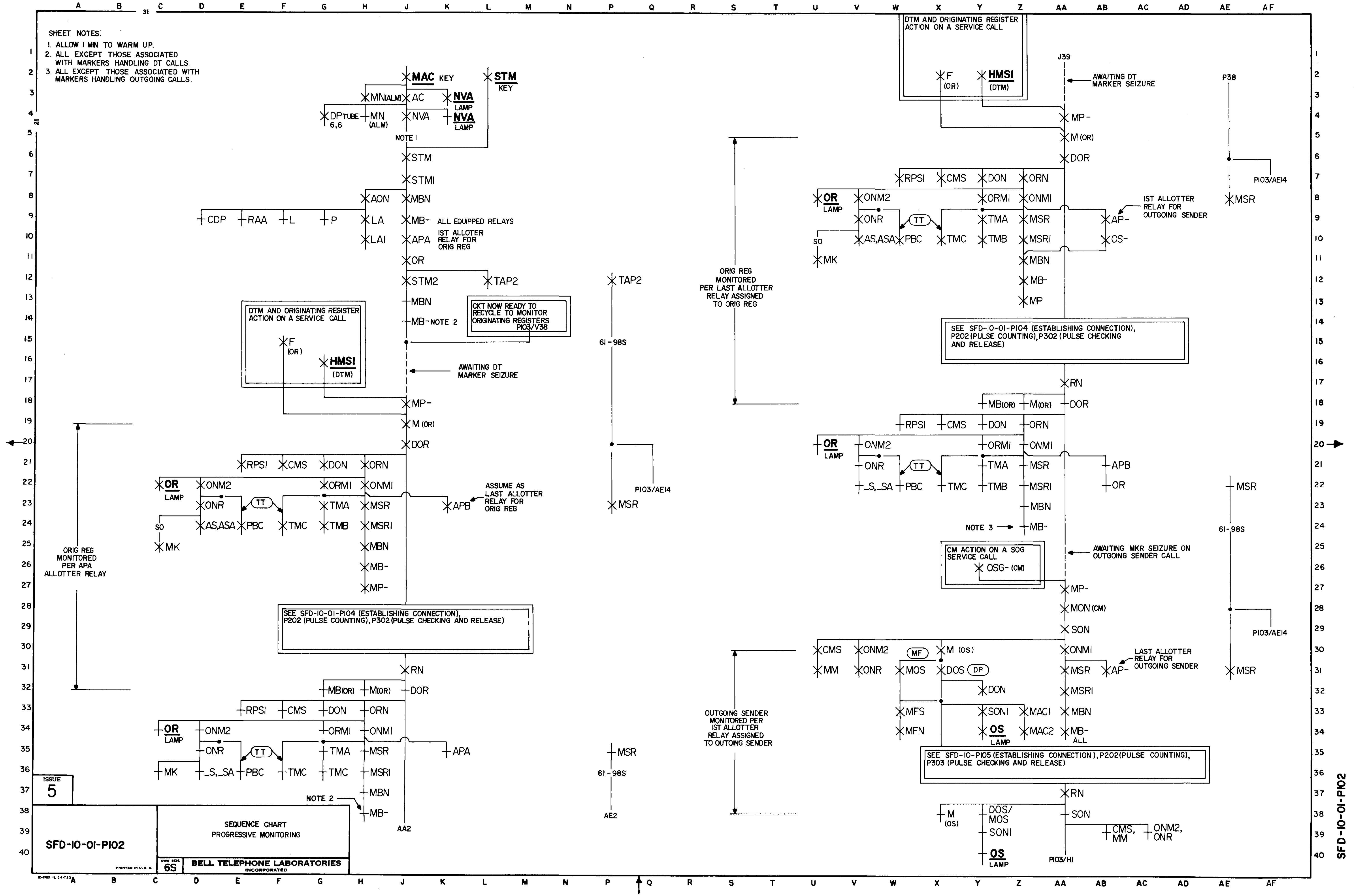
SFD-10-01-P101

SFD-10-01-P101
2 SHEETS, SHEET 1

SHEET NOTES:

1. ALLOW 1 MIN TO WARM UP.
2. ALL EXCEPT THOSE ASSOCIATED WITH MARKERS HANDLING DT CALLS.
3. ALL EXCEPT THOSE ASSOCIATED WITH MARKERS HANDLING OUTGOING CALLS.



A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE AF
31
21
MAC KEY
STM KEY
MN(ALM)
AC
NVA LAMP
DP TUBE 6,8
MN (ALM)
NVA
NVA LAMP
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STM1
AON
MBN
CDP
RAA
L
P
LA
MB-
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APA
1ST ALLOTER RELAY FOR ORIG REG
OR
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MBN
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DOR
RPS1
CMS
DON
ORN
OR LAMP
ONM2
ORM1
ONM1
ONR
TT
TMA
MSR
APB
ASSUME AS LAST ALLOTTER RELAY FOR ORIG REG
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PBC
TMC
TMB
MSR1
MK
MBN
MB-
MP-
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MB(OR)
M(OR)
DOR
RPS1
CMS
DON
ORN
OR LAMP
ONM2
ORM1
ONM1
ONR
TT
TMA
MSR
APA
MK
_S,_SA
PBC
TMC
TMC
MSR1
MBN
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MB-
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ORN
OR LAMP
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ORM1
ONM1
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TT
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CMS
DON
ORN
OR LAMP
ONM2
ORM1
ONM1
ONR
TT
TMA
MSR
APB
_S,_SA
PBC
TMC
TMB
MSR1
OR
MBN
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SON
CMS
ONM2
MF
M (OS)
ONM1
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ONR
MOS
DOS
DP
MSR
AP-
DON
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MFS
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SON1
CMS, MM
ONM2, ONR
OS LAMP
P103/H1
P38
P103/AE14
MSR
MSR
61-98S
P103/AE14
MSR
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ISSUE
5

SFD-10-01-P102

SEQUENCE CHART
PROGRESSIVE MONITORING

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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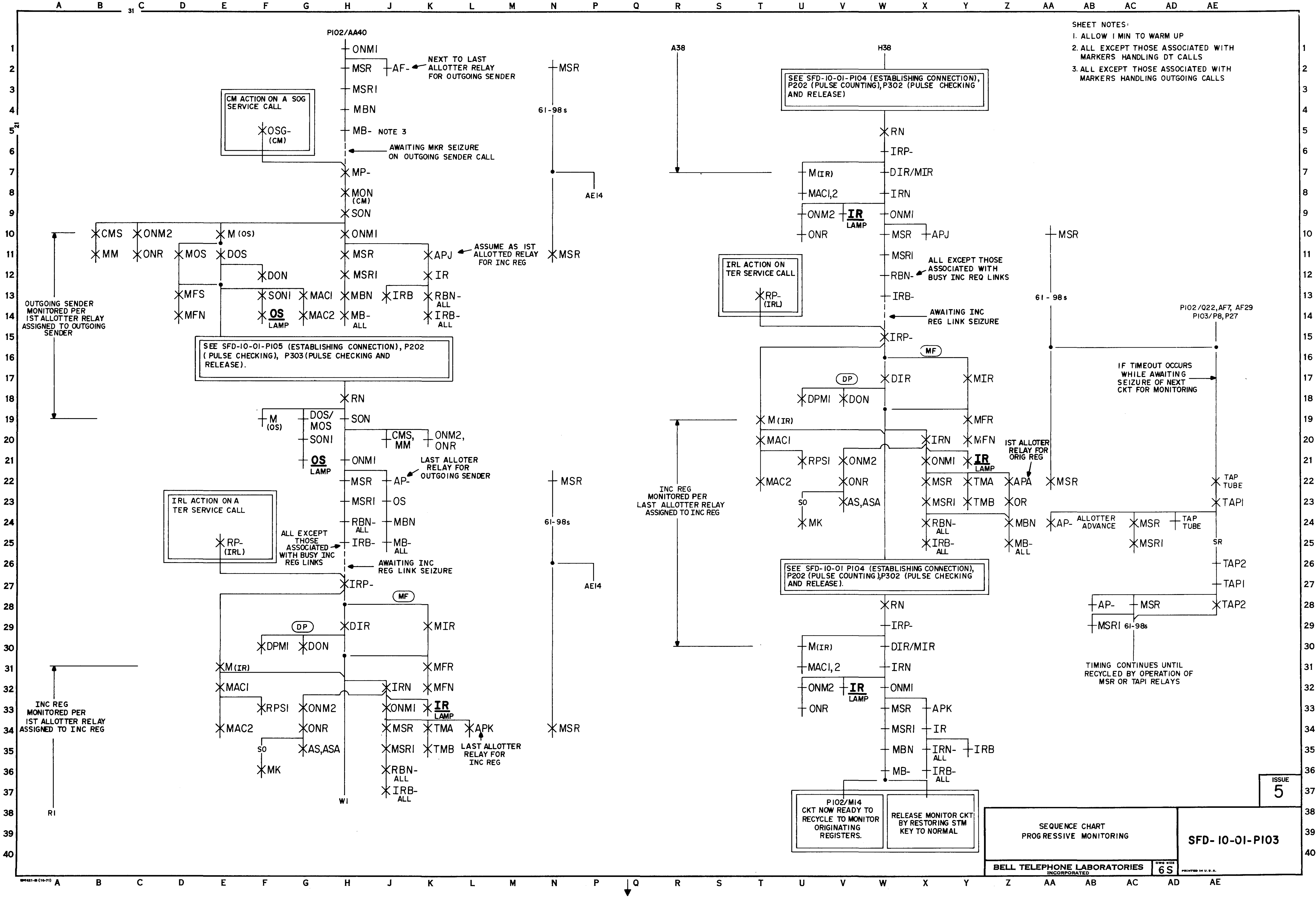
E-7481-L (4-73)

SFD-10-01-P102

SHEET NOTES:
1. ALLOW 1 MIN TO WARM UP
2. ALL EXCEPT THOSE ASSOCIATED WITH MARKERS HANDLING DT CALLS
3. ALL EXCEPT THOSE ASSOCIATED WITH MARKERS HANDLING OUTGOING CALLS



P102/AA40
ONMI
MSR
AF-
NEXT TO LAST ALLOTTER RELAY FOR OUTGOING SENDER
MSRI
MBN
MB- NOTE 3
CM ACTION ON A SOG SERVICE CALL
OSG- (CM)
AWAITING MKR SEIZURE ON OUTGOING SENDER CALL
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ONMI
MM
ONR
MOS
DOS
MSR
APJ
ASSUME AS 1ST ALLOTTED RELAY FOR INC REG
DON
MSRI
IR
MFS
SONI
MACI
MBN
IRB
RBN- ALL
MFN
OS LAMP
MAC2
MB- ALL
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DOS/MOS
SONI
SON
CMS, MM
ONM2, ONR
OS LAMP
ONMI
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MSR
AP-
MSRI
OS
IRL ACTION ON A TER SERVICE CALL
RP- (IRL)
RBN- ALL
MBN
ALL EXCEPT THOSE ASSOCIATED WITH BUSY INC REG LINKS
IRB-
MB- ALL
AWAITING INC REG LINK SEIZURE
IRP-
MF
DP
DIR
MIR
DPMI
DON
M(IR)
MFR
MACI
IRN
MFN
RPSI
ONM2
ONMI
IR LAMP
MAC2
ONR
MSR
TMA
APK
SO
AS,ASA
MSRI
TMB
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IRB- ALL
W1
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61-98s
MSR
AE14
MSR
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AE14
MSR
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APJ
MSRI
ALL EXCEPT THOSE ASSOCIATED WITH BUSY INC REQ LINKS
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RP- (IRL)
IRB-
AWAITING INC REG LINK SEIZURE
IRP-
MF
DP
DIR
MIR
DPMI
DON
M (IR)
MFR
MACI
IRN
MFN
RPSI
ONM2
ONMI
IR LAMP
1ST ALLOTER RELAY FOR ORIG REG
MAC2
ONR
MSR
TMA
APA
SO
AS,ASA
MSRI
TMB
OR
MK
RBN- ALL
MBN
IRB- ALL
MB- ALL
INC REG MONITORED PER LAST ALLOTTER RELAY ASSIGNED TO INC REG
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RN
IRP-
M(IR)
DIR/MIR
MACI, 2
IRN
ONM2
IR LAMP
ONMI
ONR
MSR
APK
MSRI
IR
MBN
IRN- ALL
IRB
MB-
IRB- ALL
P102/M14 CKT NOW READY TO RECYCLE TO MONITOR ORIGINATING REGISTERS.
RELEASE MONITOR CKT BY RESTORING STM KEY TO NORMAL
MSR
61 - 98s
MSR
P102/Q22, AF7, AF29 P103/P8, P27
IF TIMEOUT OCCURS WHILE AWAITING SEIZURE OF NEXT CKT FOR MONITORING
TAP TUBE
TAPI
AP-
ALLOTTER ADVANCE
MSR
TAP TUBE
MSRI
SR
TAP2
TAPI
AP-
MSR
TAP2
MSRI 61-98s
TIMING CONTINUES UNTIL RECYCLED BY OPERATION OF MSR OR TAPI RELAYS

ISSUE 5

SEQUENCE CHART
PROGRESSIVE MONITORING

SFD-10-01-P103

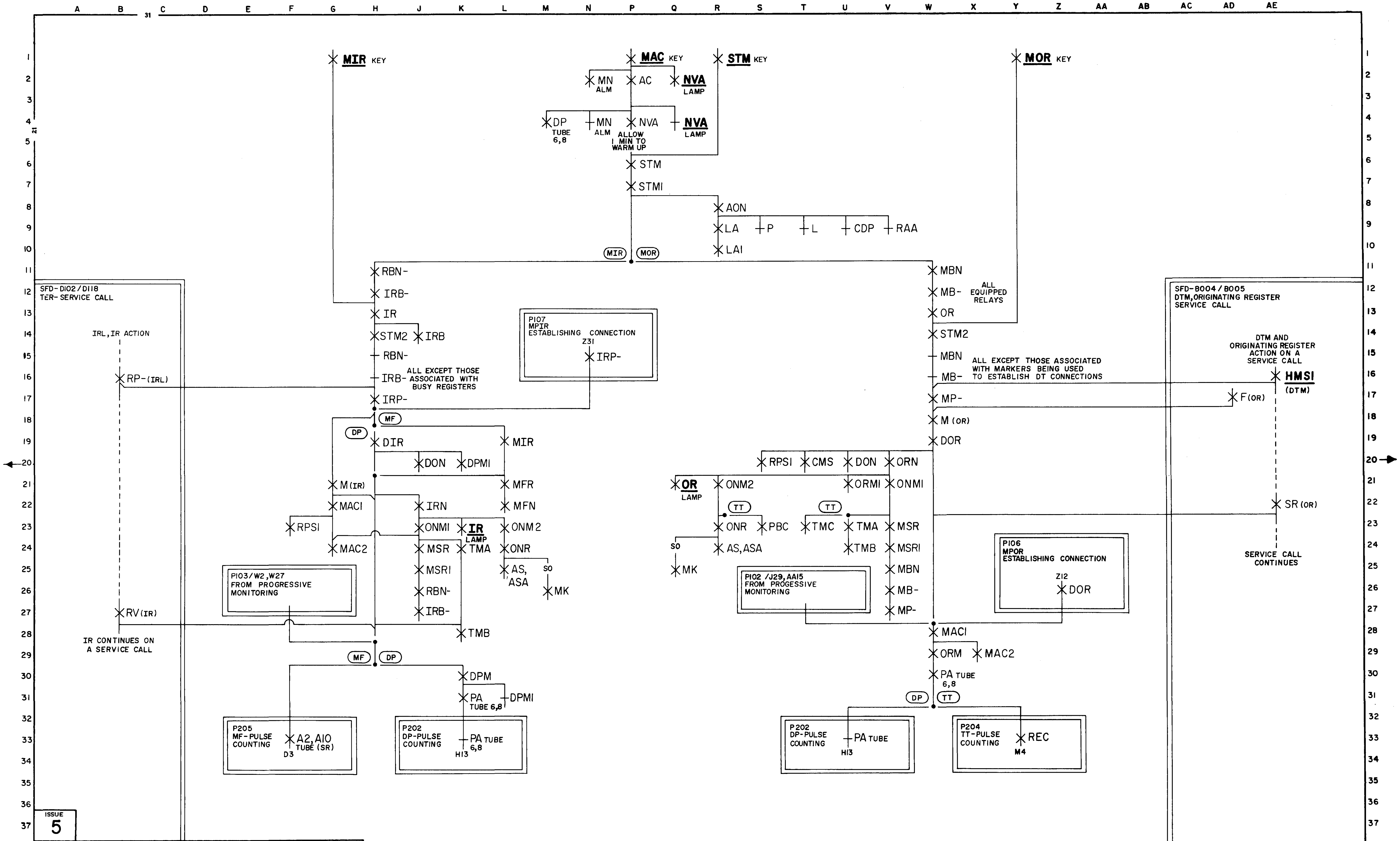
BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SFD-10-01-P103

BRUNING 44-131 24092



ISSUE
5

SFD-10-01-P104

SEQUENCE CHART
MONITOR ORIGINATING, INCOMING REGISTER
ESTABLISHING CONNECTION

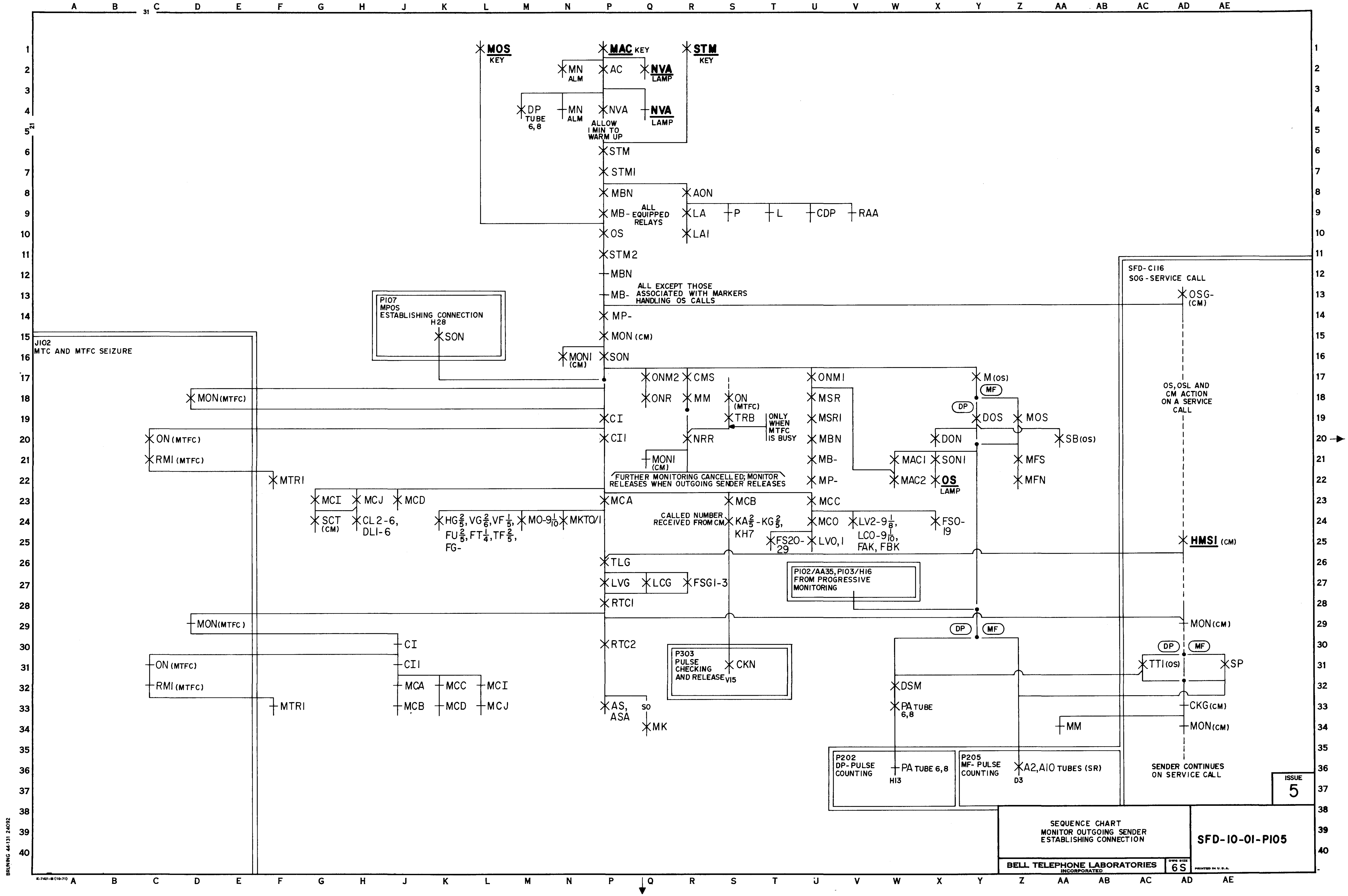
PRINTED IN U.S.A.

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-P104



SEQUENCE CHART
MONITOR OUTGOING SENDER
ESTABLISHING CONNECTION

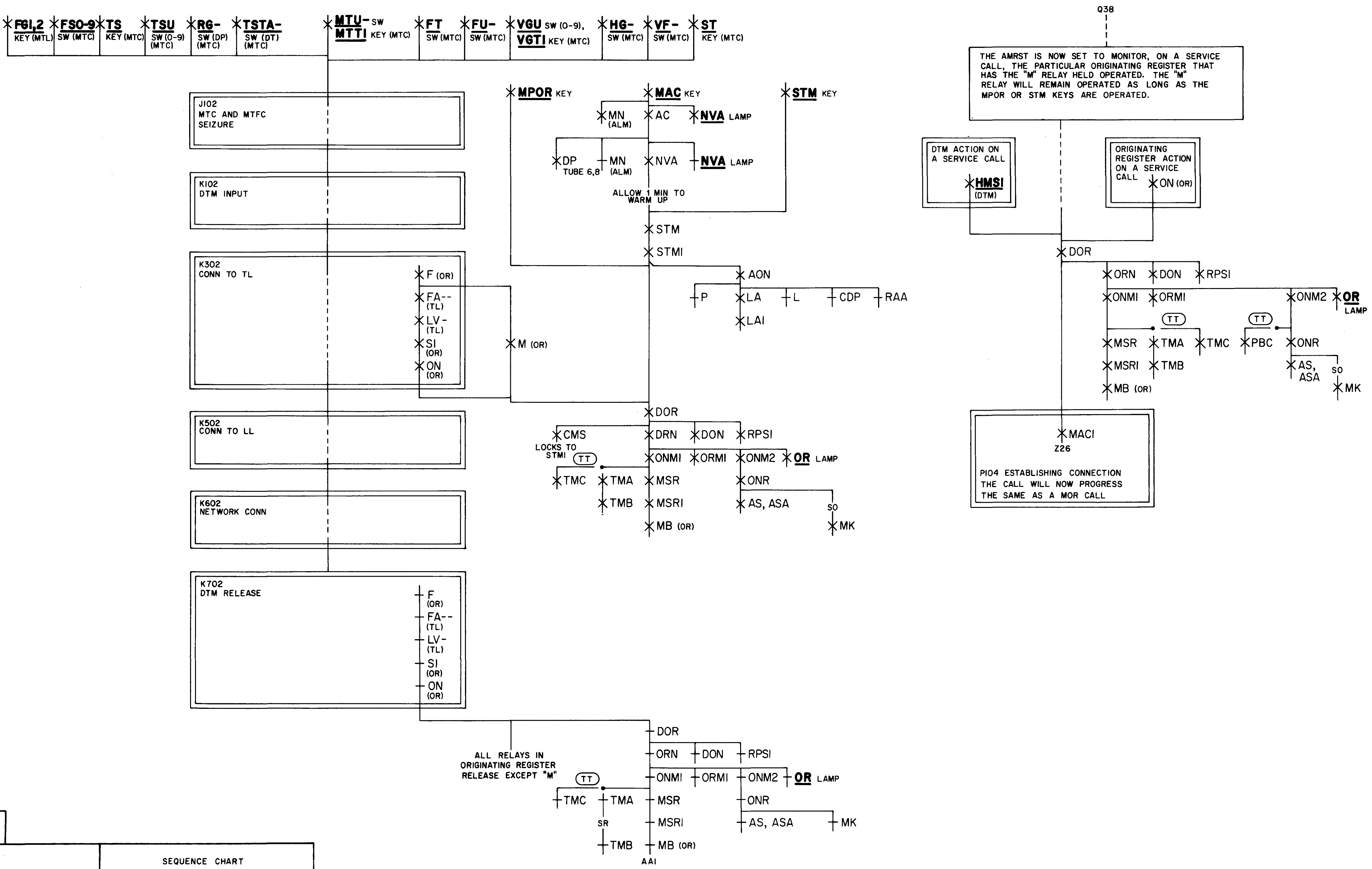
SFD-10-01-P105

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

MONITORING ON A PARTICULAR ORIGINATING REGISTER (MPOR)



THE AMRST IS NOW SET TO MONITOR, ON A SERVICE CALL, THE PARTICULAR ORIGINATING REGISTER THAT HAS THE "M" RELAY HELD OPERATED. THE "M" RELAY WILL REMAIN OPERATED AS LONG AS THE MPOR OR STM KEYS ARE OPERATED.

P104 ESTABLISHING CONNECTION
THE CALL WILL NOW PROGRESS
THE SAME AS A MOR CALL

ISSUE
5

SFD-10-01-P106

SEQUENCE CHART
MONITOR PARTICULAR ORIGINATING REGISTER
ESTABLISHING CONNECTION

PRINTED IN U. S. A.

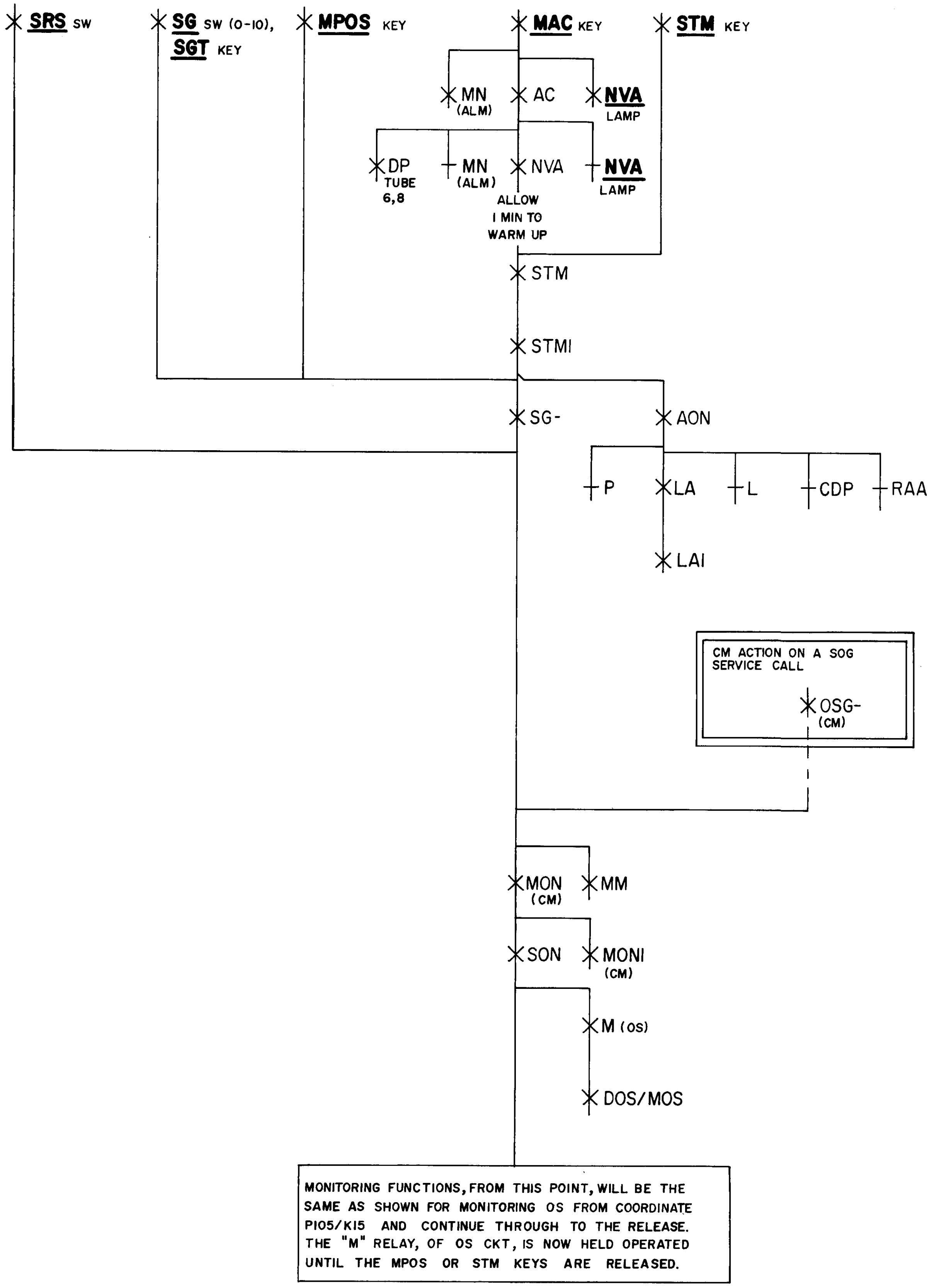
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

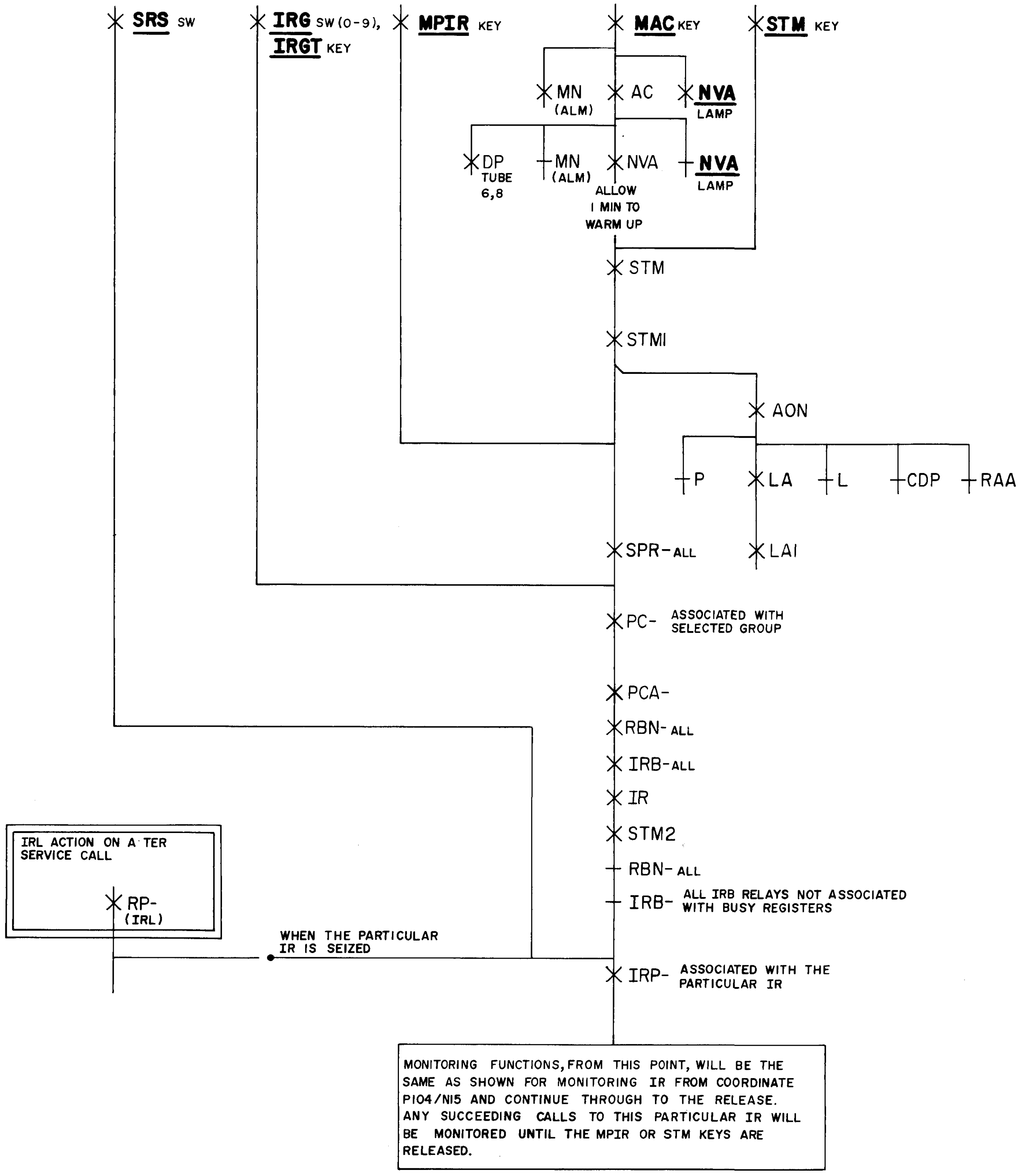
SFD-10-01-P106

MONITORING ON A PARTICULAR OUTGOING SENDER (MPOS)



MONITORING FUNCTIONS, FROM THIS POINT, WILL BE THE SAME AS SHOWN FOR MONITORING OS FROM COORDINATE P105/K15 AND CONTINUE THROUGH TO THE RELEASE. THE "M" RELAY, OF OS CKT, IS NOW HELD OPERATED UNTIL THE MPOS OR STM KEYS ARE RELEASED.

MONITORING ON A PARTICULAR INCOMING REGISTER (MPIR)



MONITORING FUNCTIONS, FROM THIS POINT, WILL BE THE SAME AS SHOWN FOR MONITORING IR FROM COORDINATE P104/N15 AND CONTINUE THROUGH TO THE RELEASE. ANY SUCCEEDING CALLS TO THIS PARTICULAR IR WILL BE MONITORED UNTIL THE MPIR OR STM KEYS ARE RELEASED.

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5

SEQUENCE CHART
MONITOR PARTICULAR INCOMING REGISTER
OUTGOING SENDER
ESTABLISHING CONNECTION

SFD-10-01-P107

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

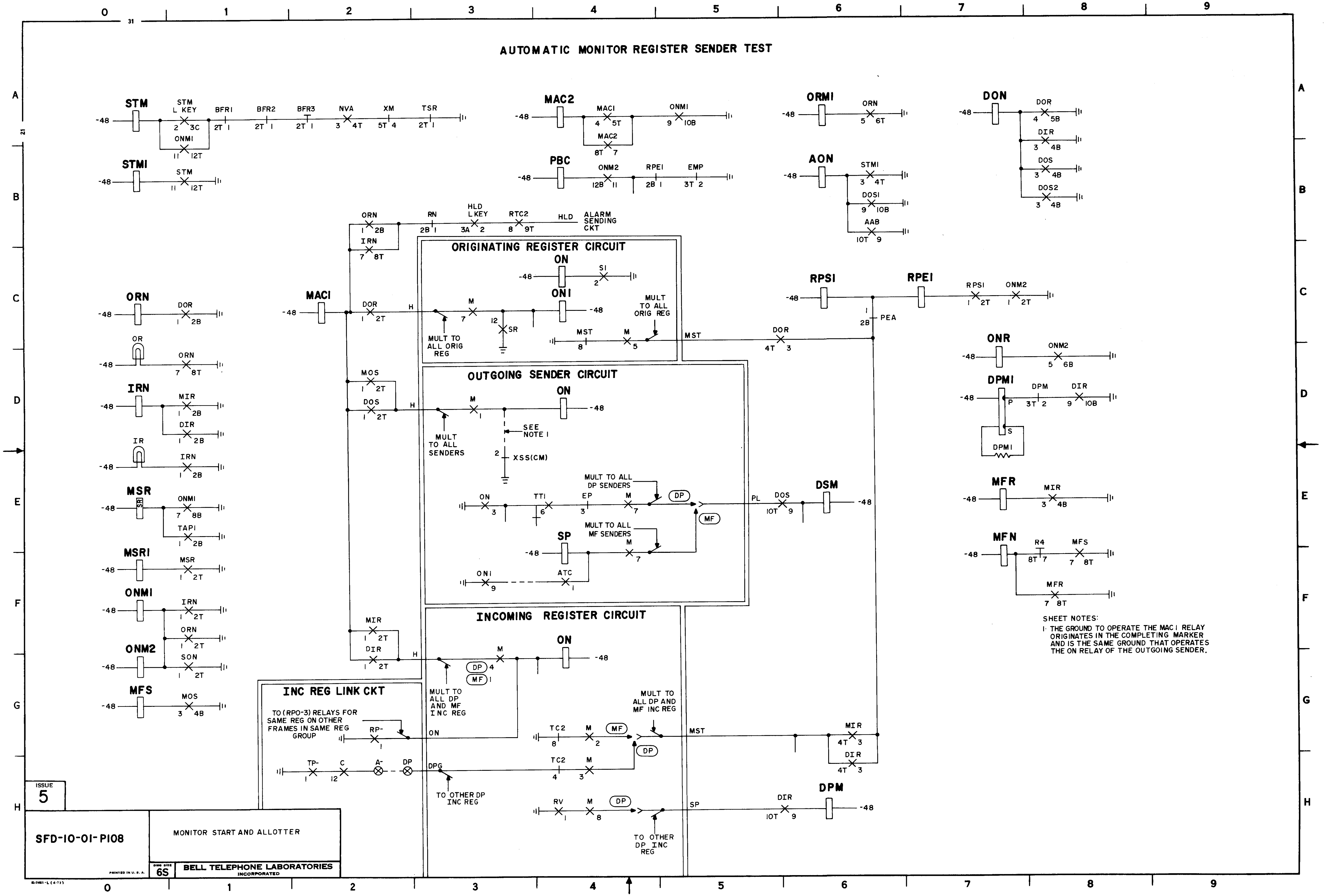
PRINTED IN U.S.A.

E-7421-B (10-71)

SFD-10-01-P107

BRUNING 44-131 24092

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. THE GROUND TO OPERATE THE MAC1 RELAY ORIGINATES IN THE COMPLETING MARKER AND IS THE SAME GROUND THAT OPERATES THE ON RELAY OF THE OUTGOING SENDER.

ISSUE 5

SFD-10-01-P108

MONITOR START AND ALLOTTER

DWG SIZE 6S

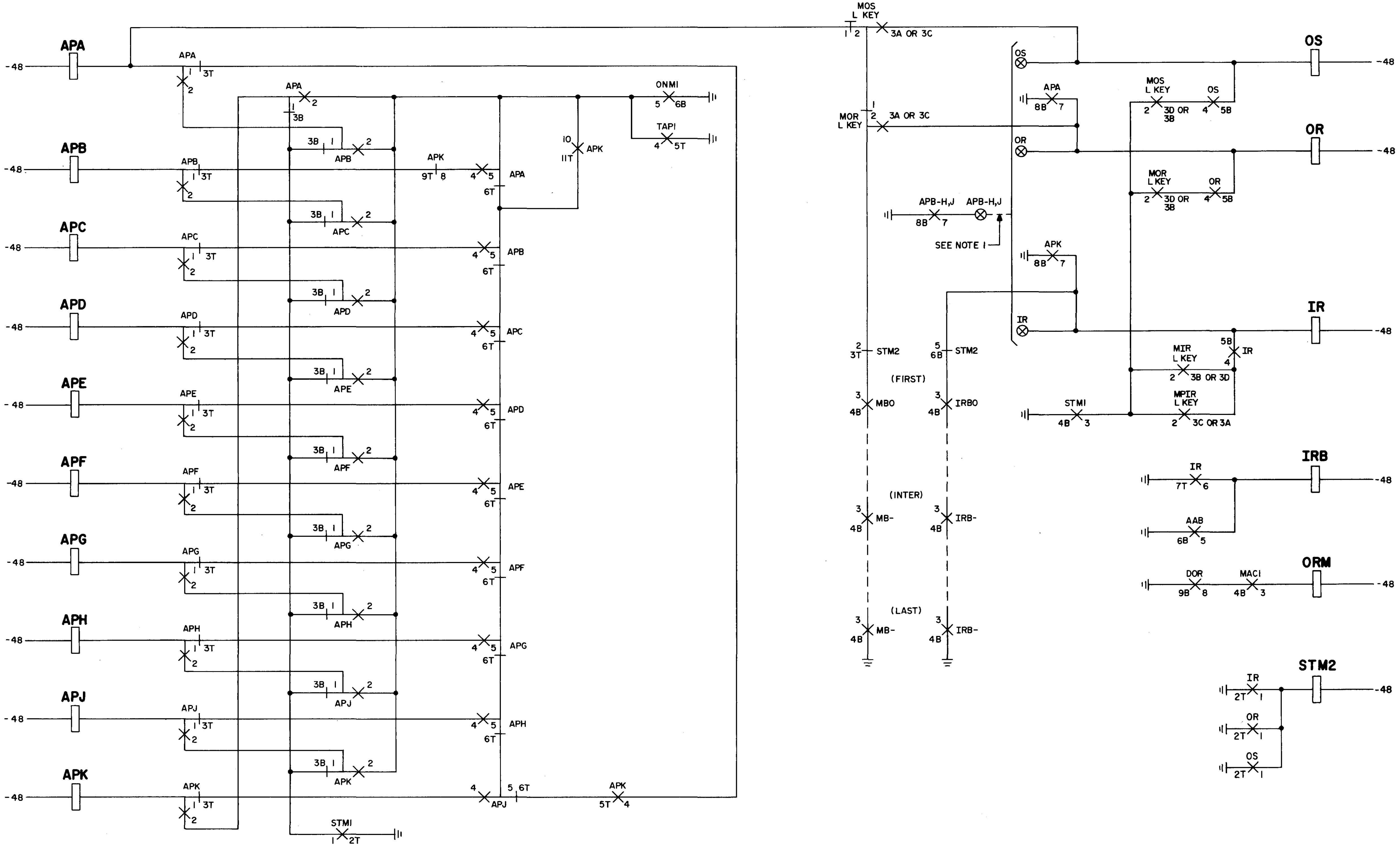
BELL TELEPHONE LABORATORIES INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-73)

SFD-10-01-P108

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. CROSS CONNECT TO OS, OR, IR TO CONTROL MONITOR PROGRESSION.

MONITOR START AND ALLOTTER

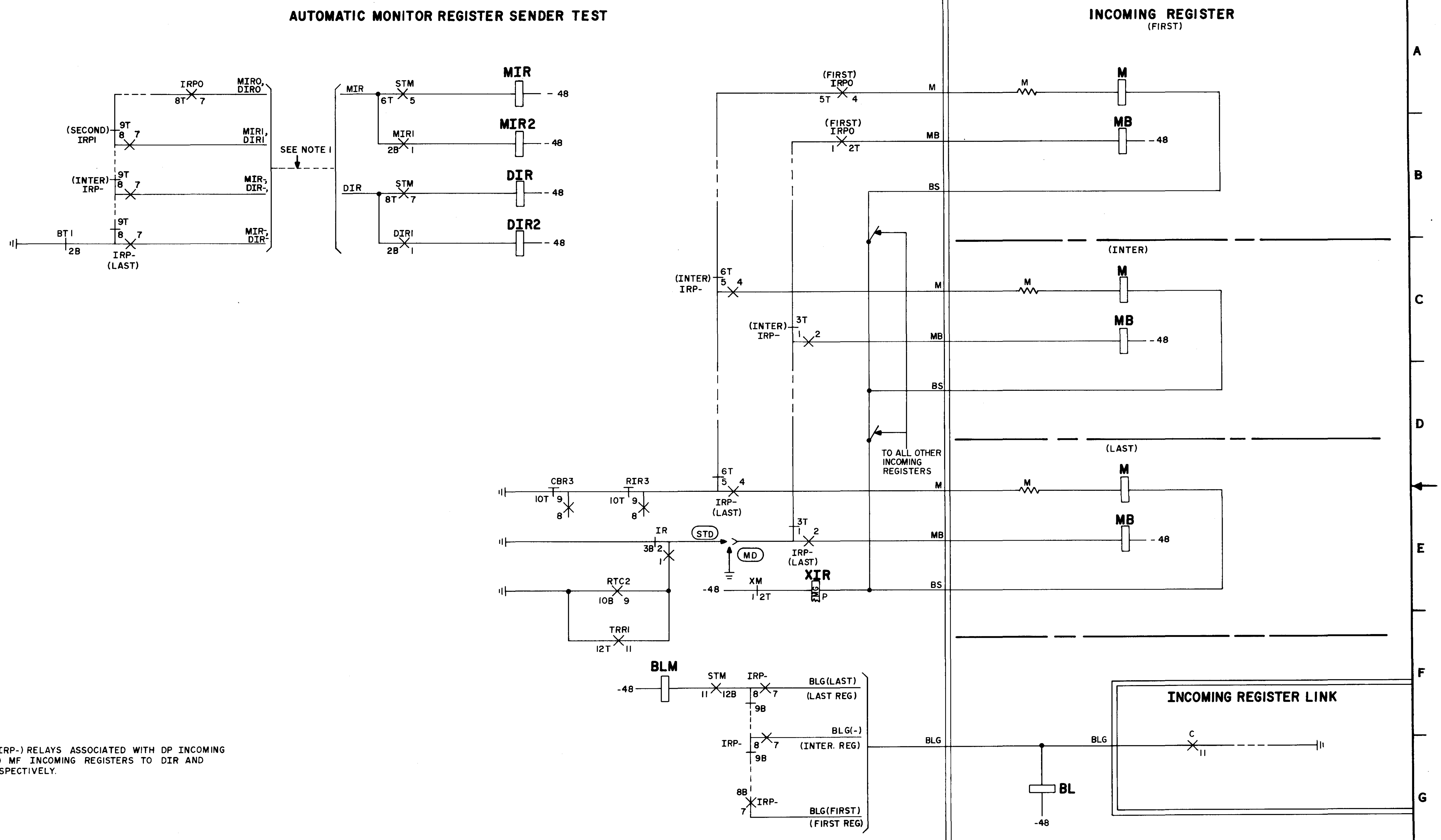
BELL TELEPHONE LABORATORIES
INCORPORATED

6S

PRINTED IN U.S.A.

ISSUE 5

SFD-10-01-P109



SHEET NOTES:

1. CONNECT 7T (IRP-) RELAYS ASSOCIATED WITH DP INCOMING REGISTERS AND MF INCOMING REGISTERS TO DIR AND MIR LEADS RESPECTIVELY.

ISSUE
5

SFD-10-01-P110

INCOMING REGISTER CONTROL

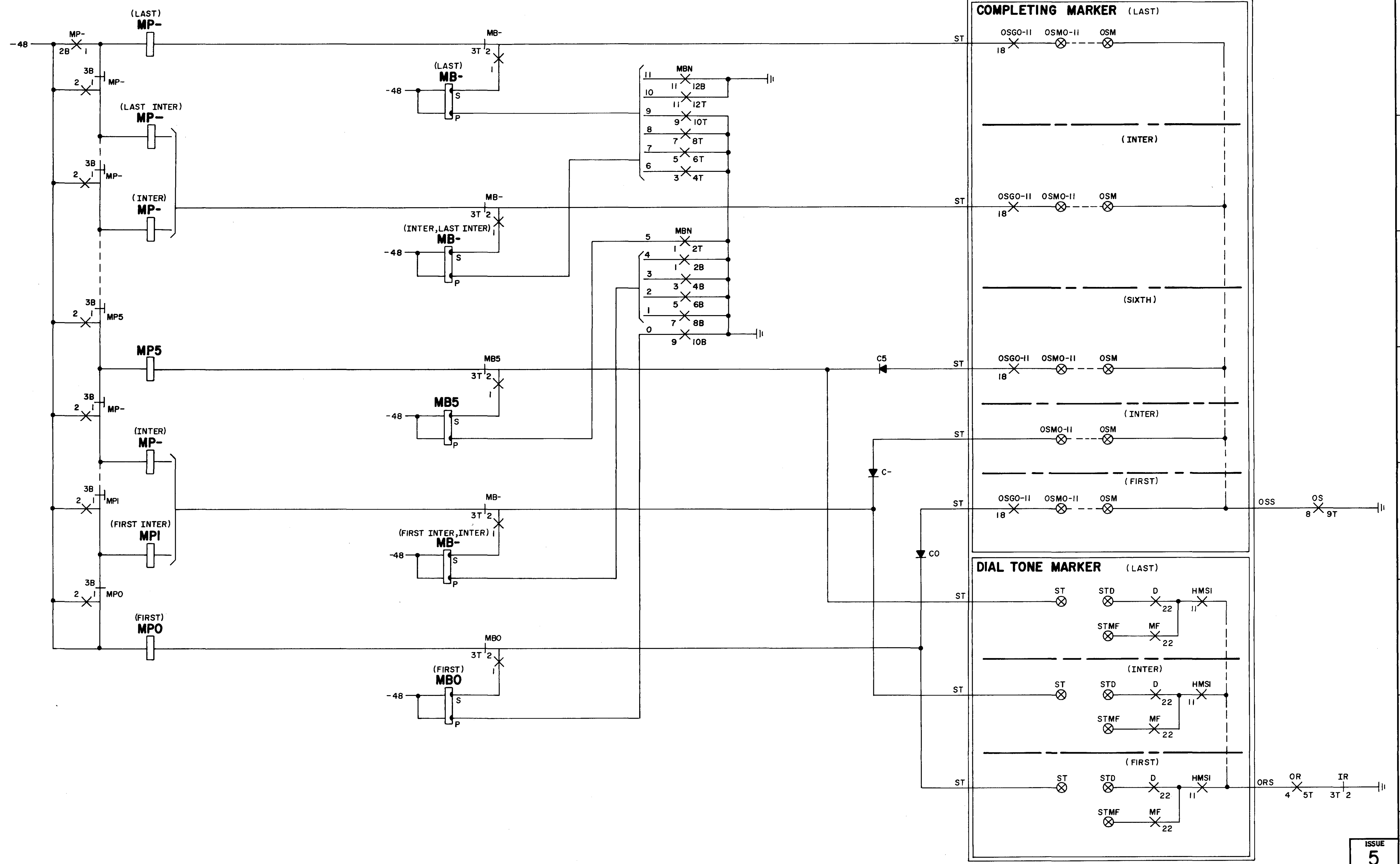
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-73)

AUTOMATIC MONITOR REGISTER SENDER TEST



MARKER CONTROL

SFD-10-01-P111

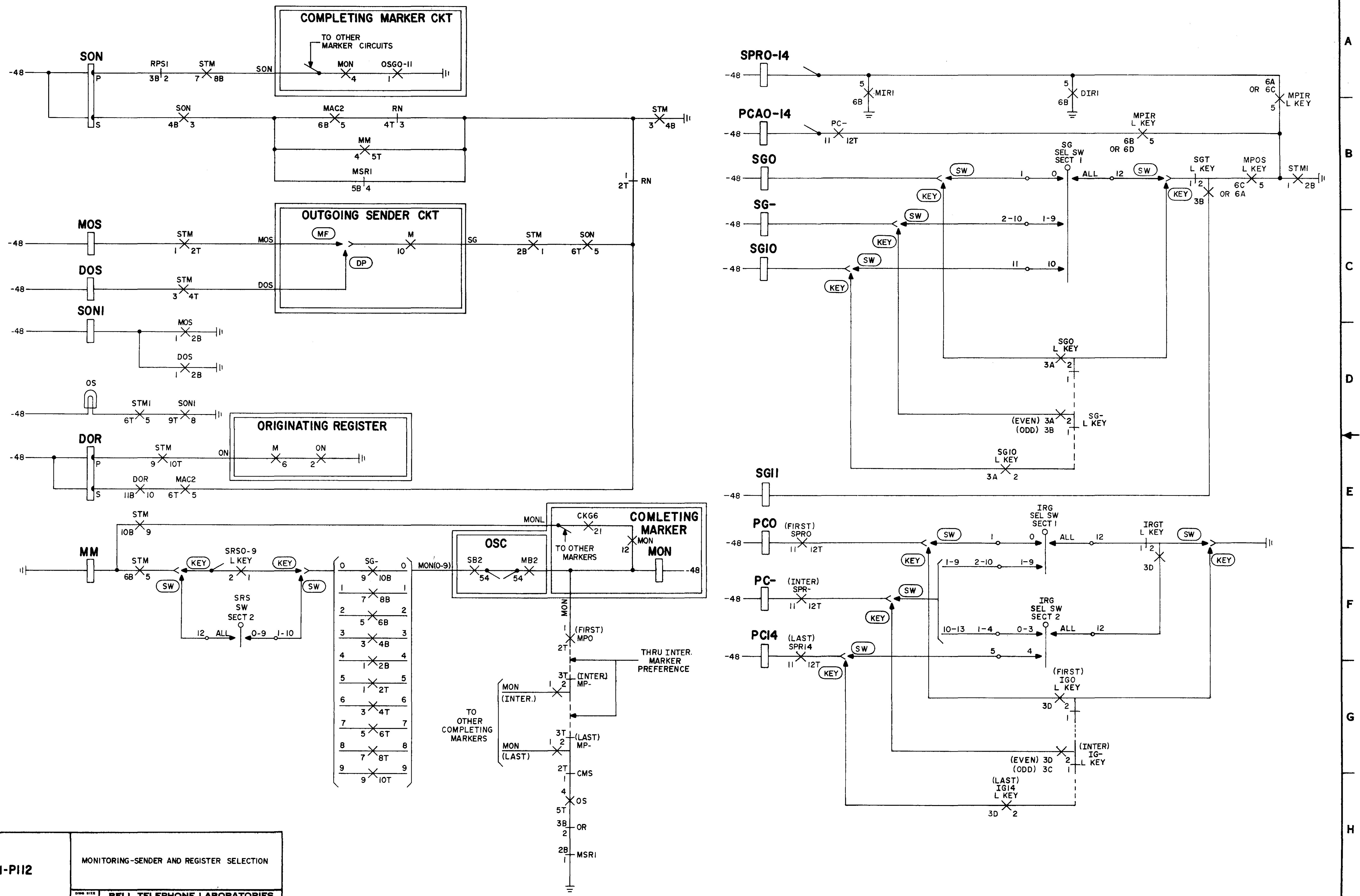
ISSUE 5

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
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SFD-10-01-P112

MONITORING-SENDER AND REGISTER SELECTION

DWG SIZE
6S

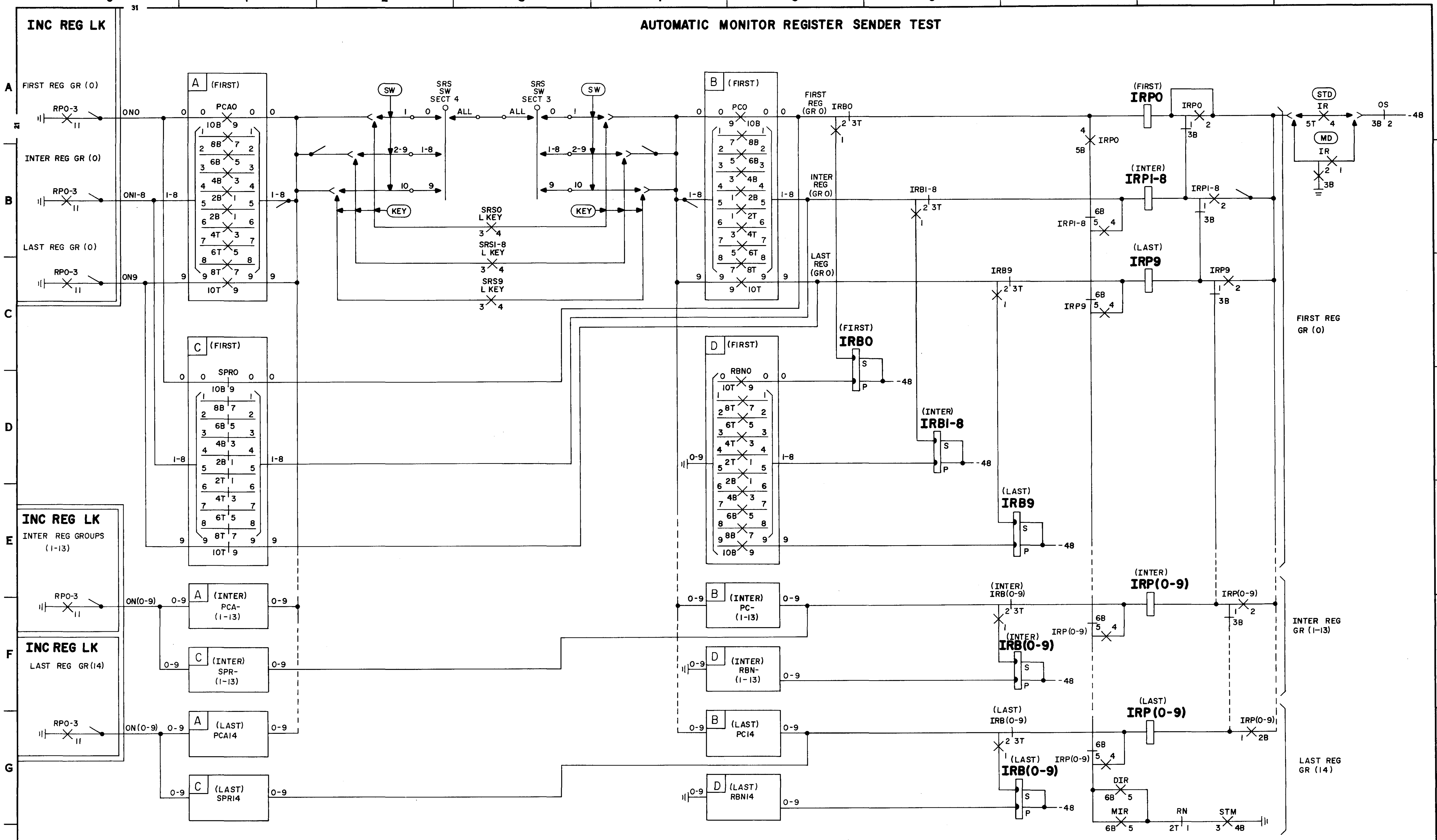
BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U. S. A.

E-7481-L (4-73)

SFD-10-01-P112

AUTOMATIC MONITOR REGISTER SENDER TEST



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5

INCOMING REGISTER
PREFERENCE AND SELECTION

SFD-10-01-P113

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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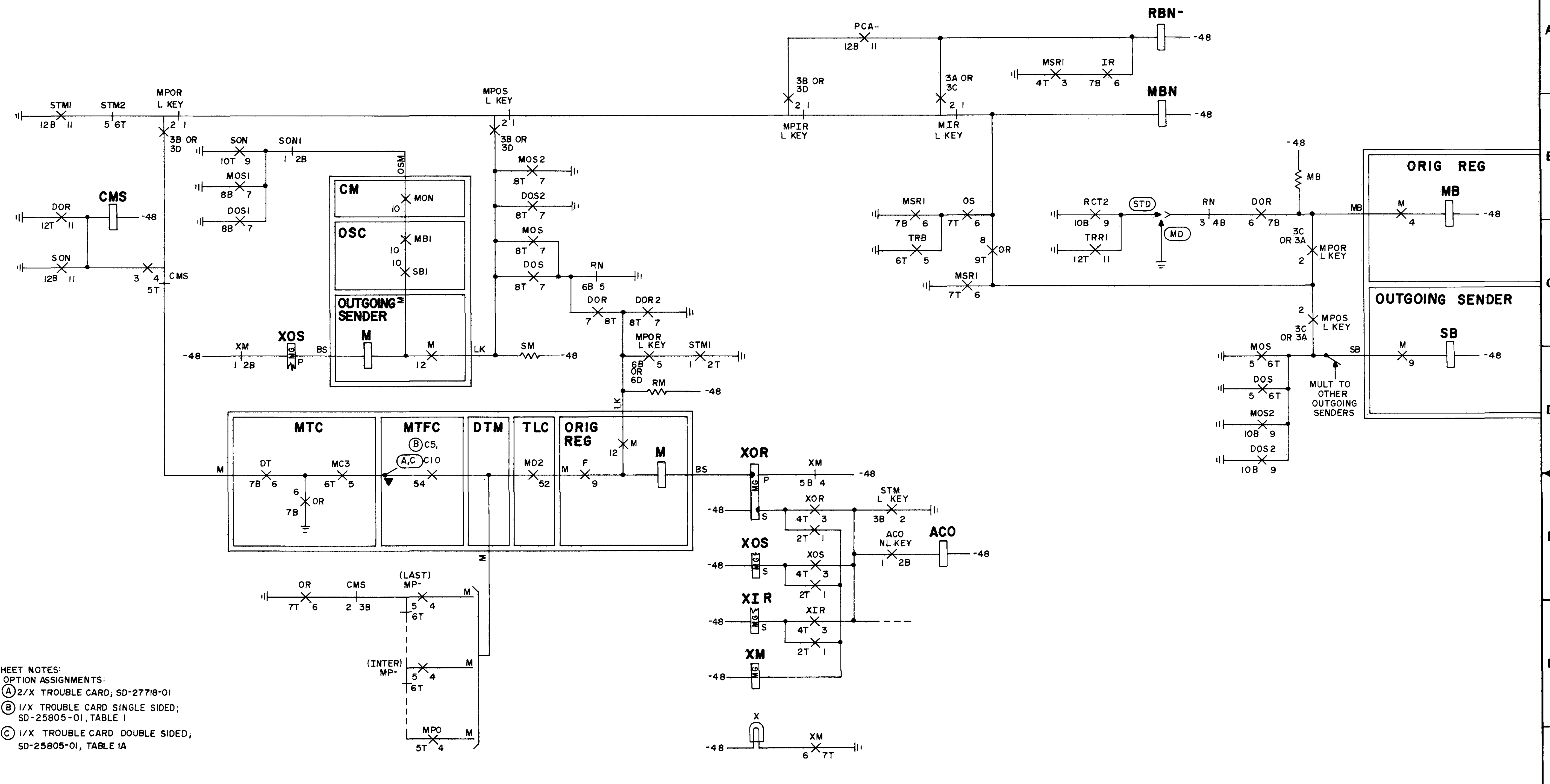
SFD-10-01-P113

E-7481 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

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SFD-10-01-P114

MONITORING PARTICULAR CIRCUIT

DWG SIZE 6S

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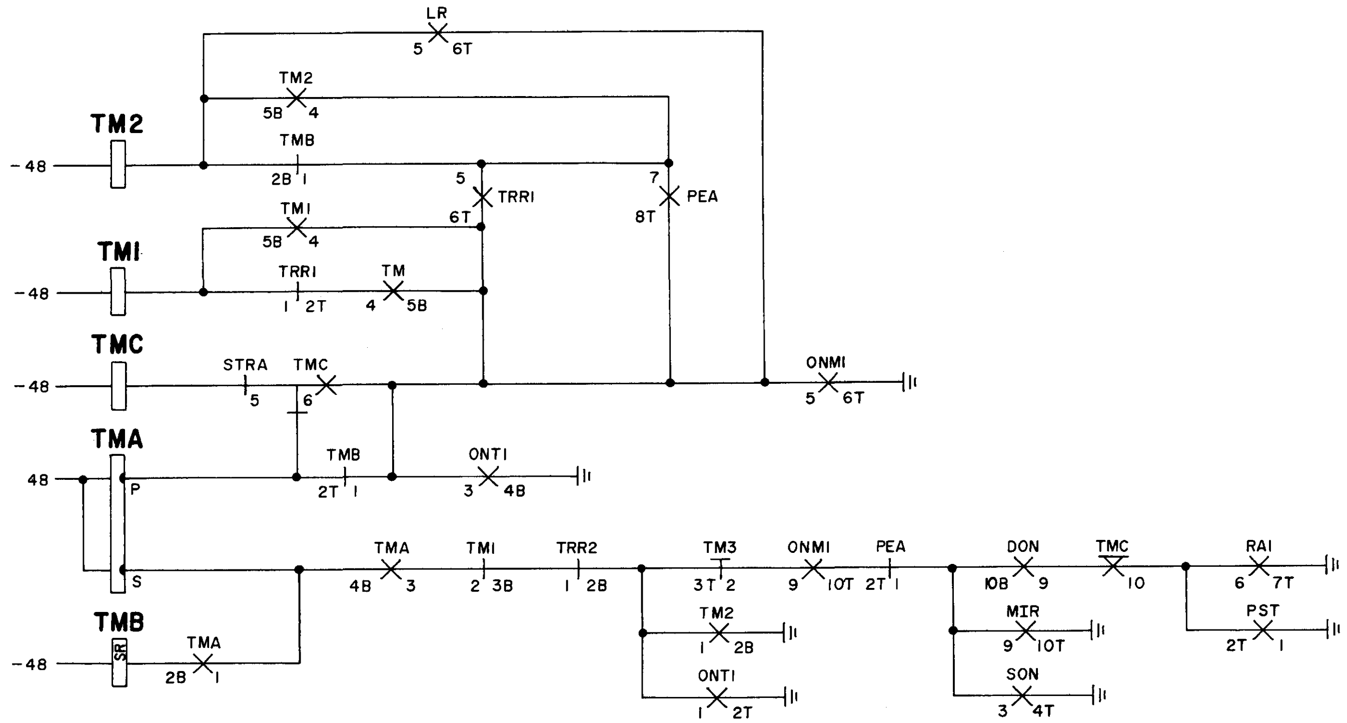
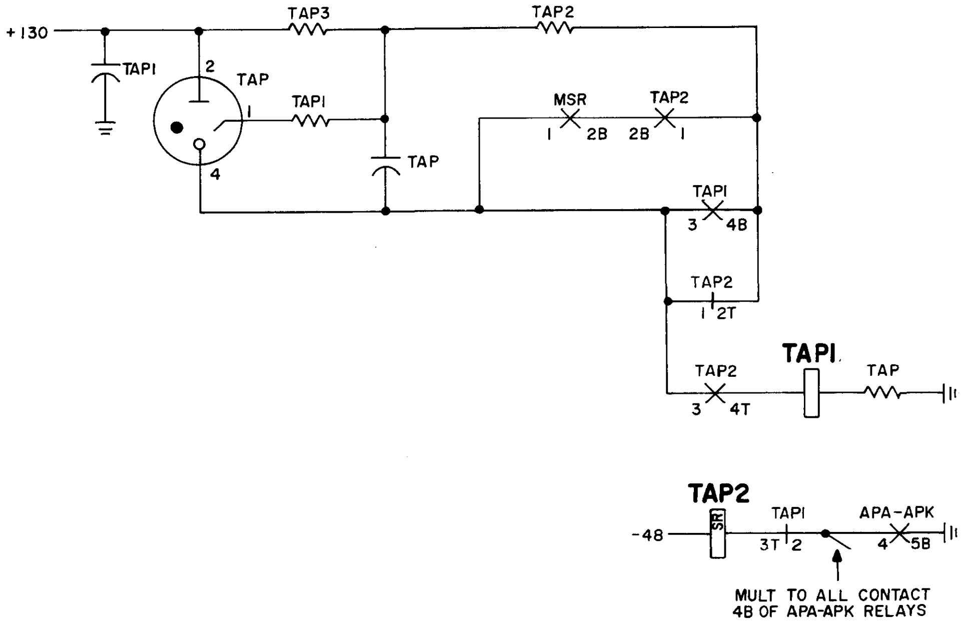
INCORPORATED

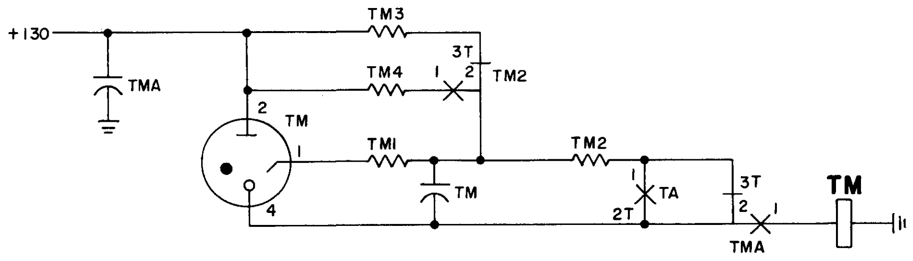
PRINTED IN U.S.A.

E-7481-L (4-71)

AUTOMATIC MONITOR REGISTER SENDER TEST







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TIMING

SFD-10-01-P115

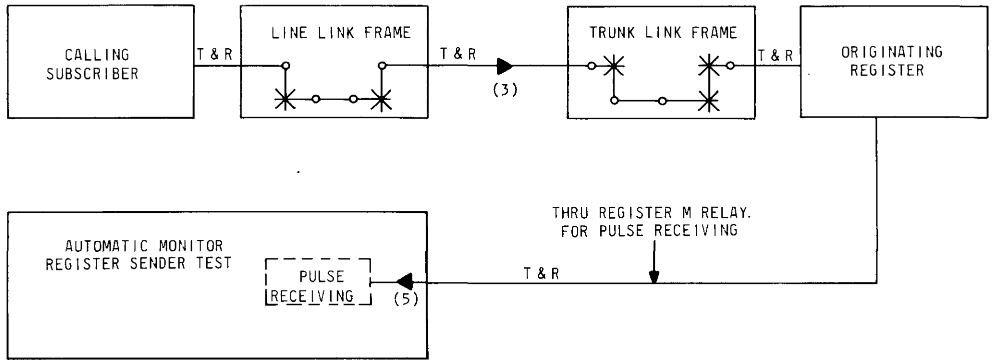
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

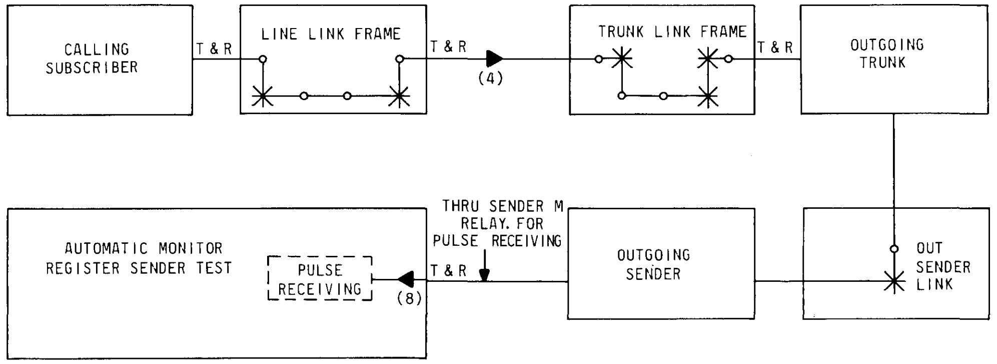
PRINTED IN U.S.A.

E-7461 (10-71)

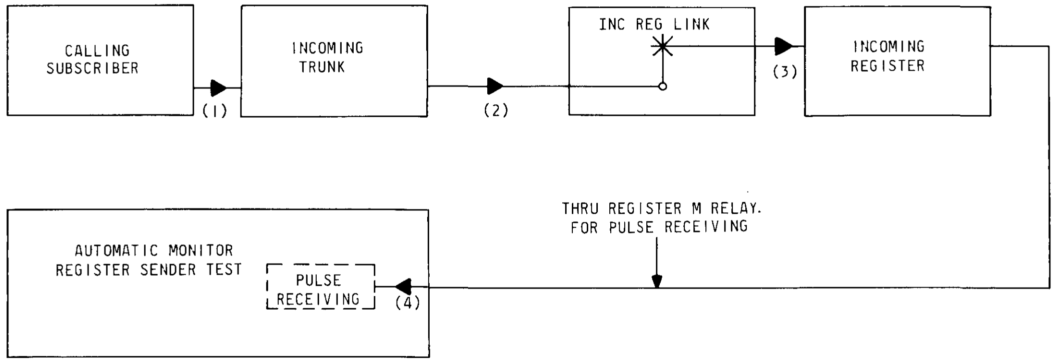
MONITORING ORIGINATING REGISTERS



MONITORING OUTGOING SENDERS



MONITORING INCOMING REGISTERS



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P215	TOUCH TONE TRANSLATION
P216	DIGIT REGISTRATION
P217	DIGIT REGISTRATION

CAUTION!

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART P2
PULSE COUNTING

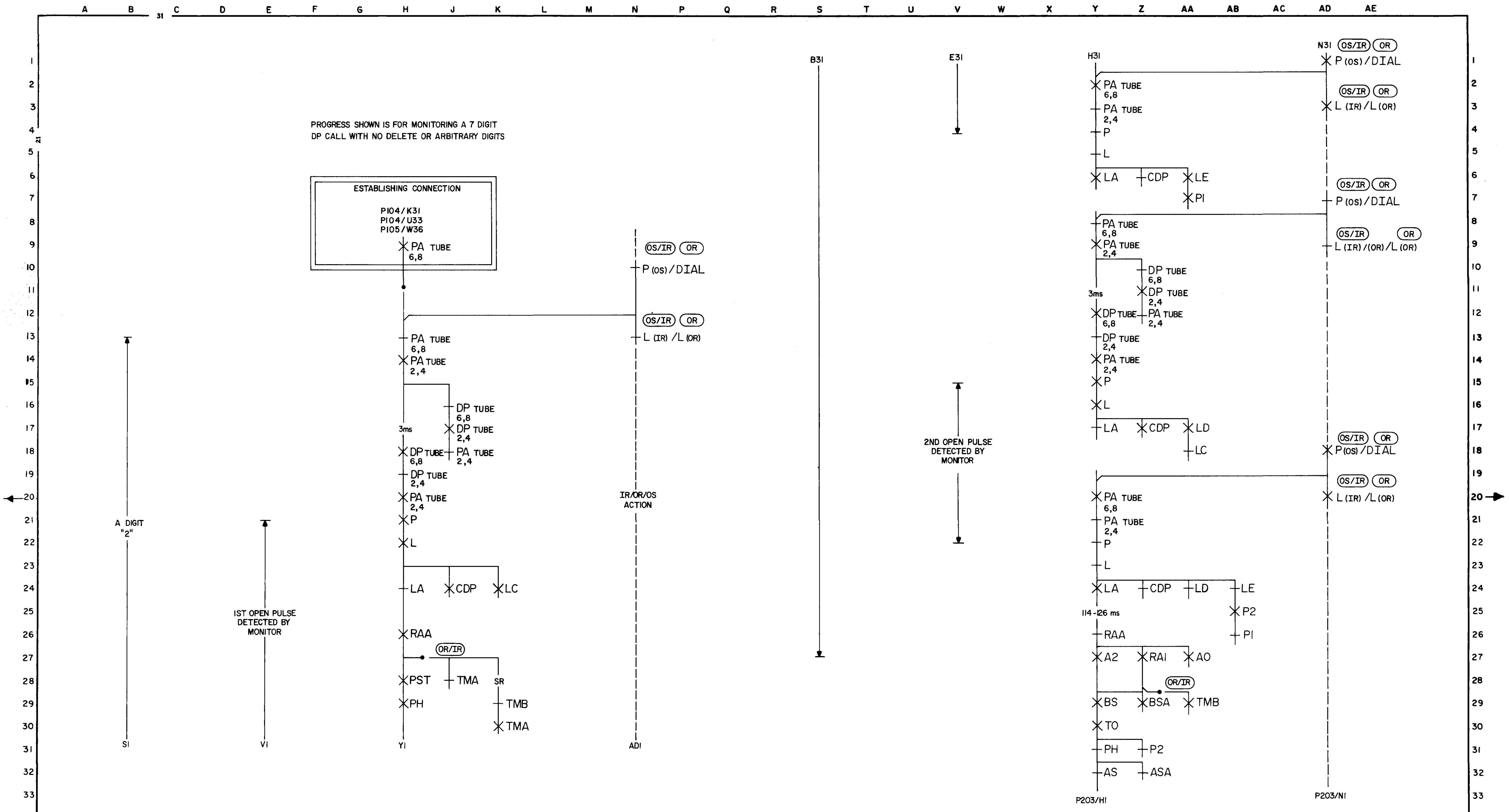
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

SFD-10-01-P201

PRINTED IN U.S.A.

SFD-10-01-P201
2 SHEETS, SHEET 1



PROGRESS SHOWN IS FOR MONITORING A 7 DIGIT DP CALL WITH NO DELETE OR ARBITRARY DIGITS

ISSUE
5

SFD-10-01-P202

SEQUENCE CHART
MONITOR ORIGINATING, INCOMING
REGISTERS, OUTGOING SENDER
DP-PULSE COUNTING

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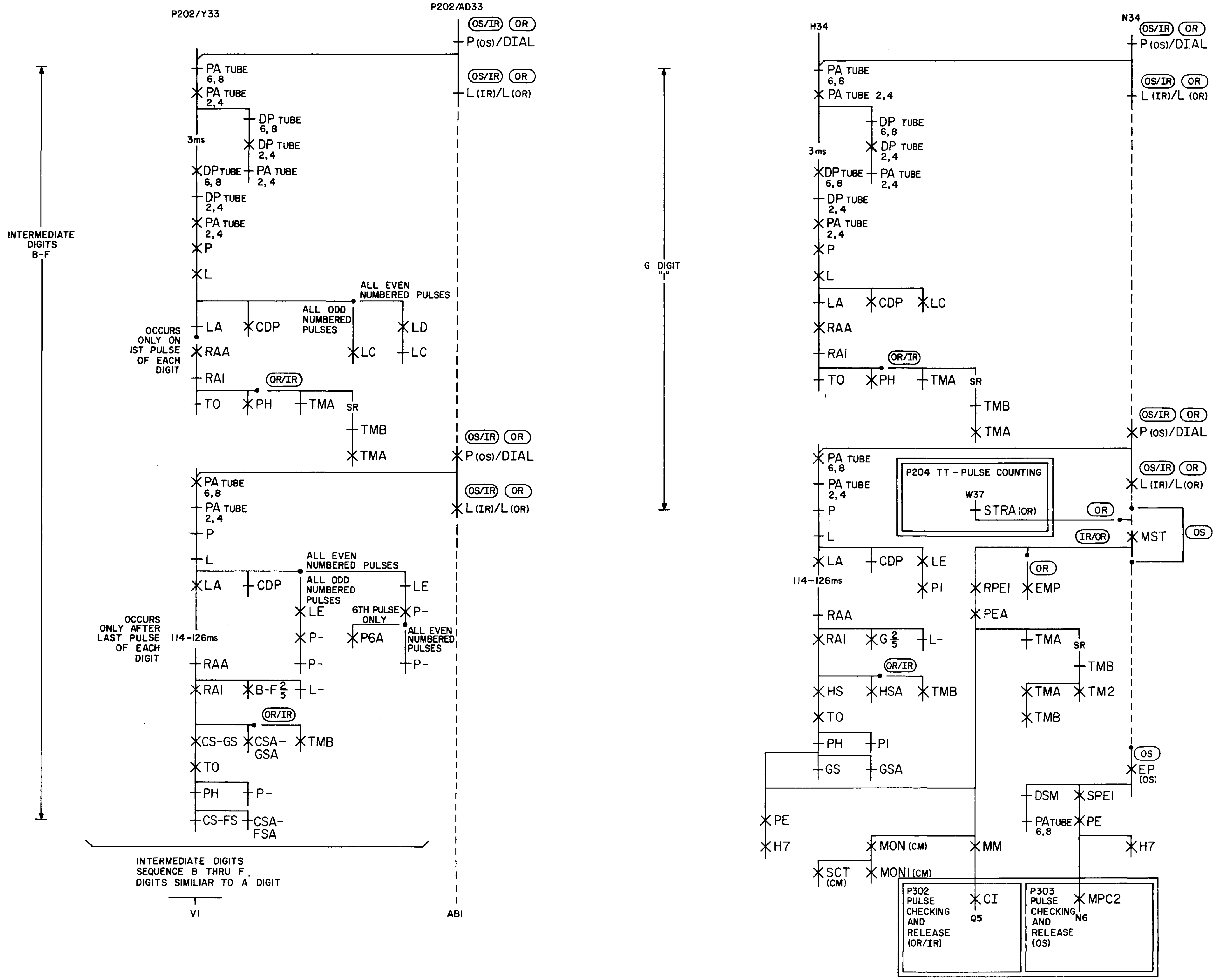
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-P202



SEQUENCE CHART MONITOR ORIGINATING, INCOMING REGISTERS, OUTGOING SENDER DP-PULSE COUNTING	SFD-10-01-P203
BELL TELEPHONE LABORATORIES INCORPORATED	6S

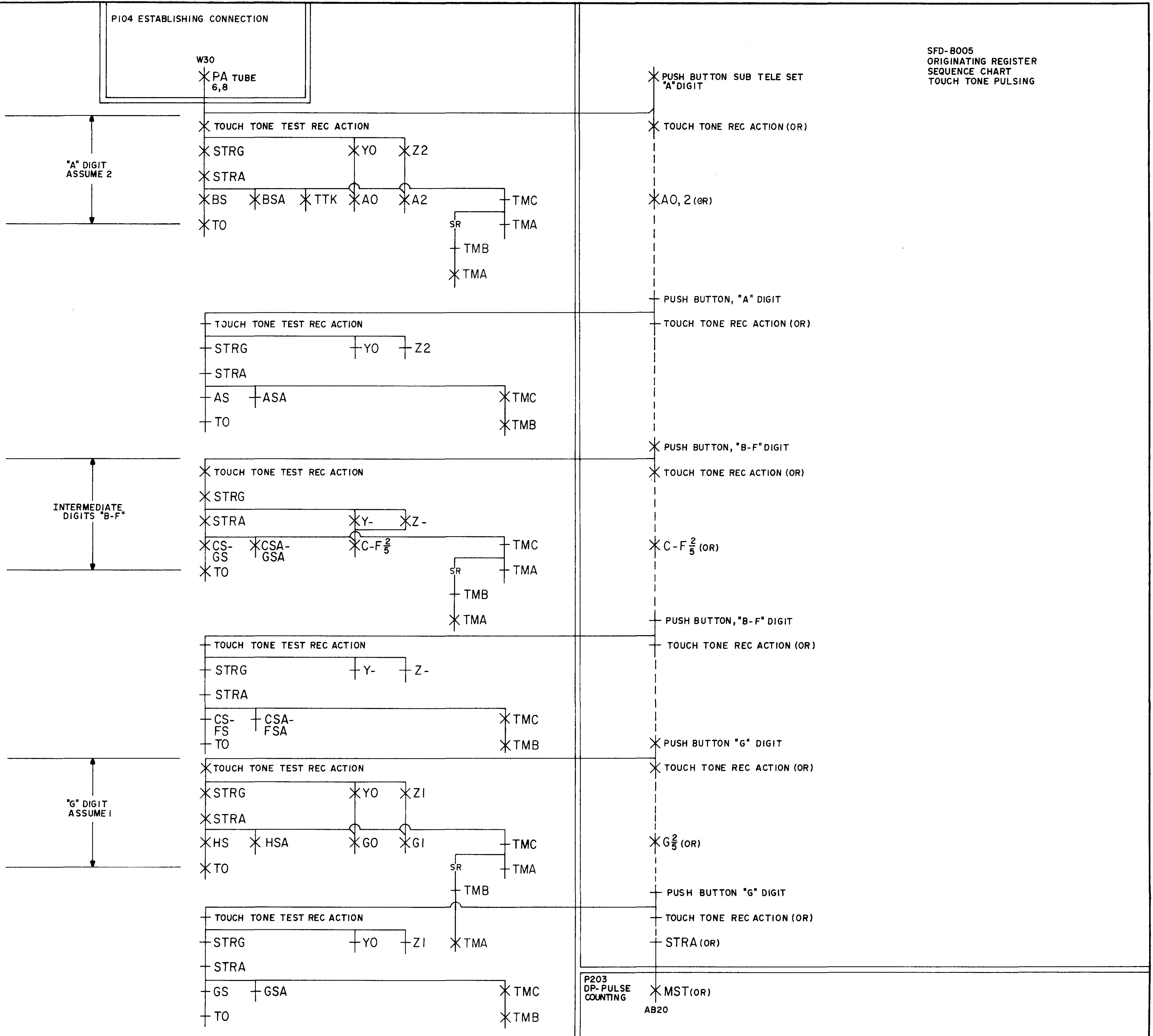
ISSUE 5

SFD-10-01-P203

BRUNING 44-131 24092

E-7481-B (10-71)

TOUCH TONE REC FOR ORIGINATING REGISTERS PER SD-98148-01 AND TOUCH TONE TEST REC FOR AMRST PER SD-98150-01.


P104 ESTABLISHING CONNECTION
W30
PA TUBE 6,8
"A" DIGIT ASSUME 2
TOUCH TONE TEST REC ACTION
STRG
YO
Z2
STRA
BS
BSA
TTK
AO
A2
TMC
TO
SR
TMA
TMB
TMA
TOUCH TONE TEST REC ACTION
STRG
YO
Z2
STRA
AS
ASA
TMC
TO
TMB
INTERMEDIATE DIGITS "B-F"
TOUCH TONE TEST REC ACTION
STRG
STRA
Y-
Z-
CS-GS
CSA-GSA
C-F 2/5
TMC
TO
SR
TMA
TMB
TMA
TOUCH TONE TEST REC ACTION
STRG
Y-
Z-
STRA
CS-FS
CSA-FSA
TMC
TO
TMB
"G" DIGIT ASSUME I
TOUCH TONE TEST REC ACTION
STRG
YO
ZI
STRA
HS
HSA
GO
GI
TMC
TO
SR
TMA
TMB
TOUCH TONE TEST REC ACTION
STRG
YO
ZI
TMA
STRA
GS
GSA
TMC
TO
TMB
SFD-8005 ORIGINATING REGISTER SEQUENCE CHART TOUCH TONE PULSING
PUSH BUTTON SUB TELE SET "A" DIGIT
TOUCH TONE REC ACTION (OR)
AO, 2 (OR)
PUSH BUTTON, "A" DIGIT
TOUCH TONE REC ACTION (OR)
PUSH BUTTON, "B-F" DIGIT
TOUCH TONE REC ACTION (OR)
C-F 2/5 (OR)
PUSH BUTTON, "B-F" DIGIT
TOUCH TONE REC ACTION (OR)
PUSH BUTTON "G" DIGIT
TOUCH TONE REC ACTION (OR)
G 2/5 (OR)
PUSH BUTTON "G" DIGIT
TOUCH TONE REC ACTION (OR)
STRA (OR)
P203 DP-PULSE COUNTING
MST (OR)
AB20

ISSUE
5

SFD-10-01-P204

SEQUENCE CHART
MONITOR ORIGINATING REGISTER
TT-PULSE COUNTING

6S

BELL TELEPHONE LABORATORIES
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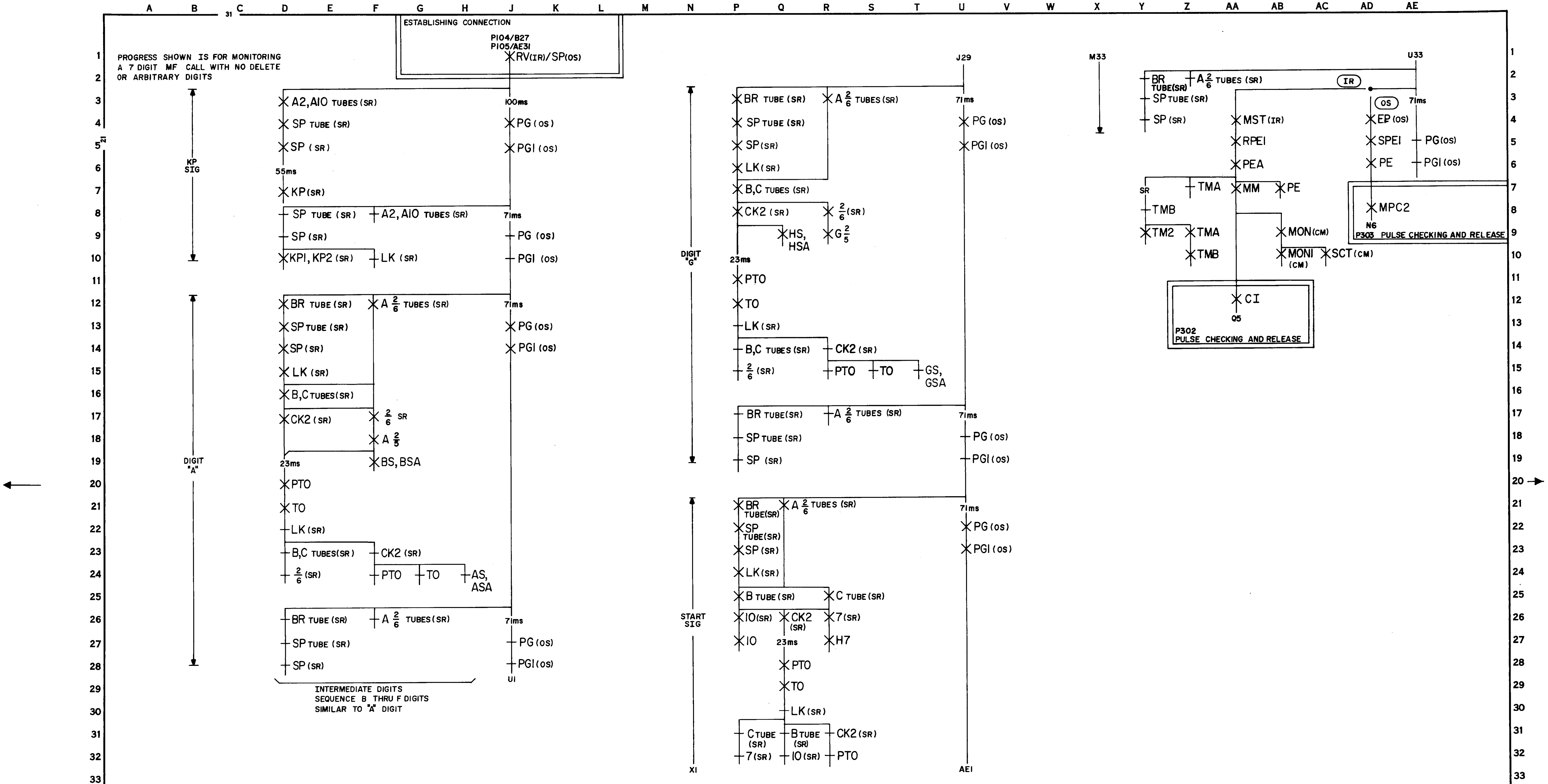
E-7481-L (4-73)

SFD-10-01-P204


PROGRESS SHOWN IS FOR MONITORING A 7 DIGIT MF CALL WITH NO DELETE OR ARBITRARY DIGITS

ISSUE 5

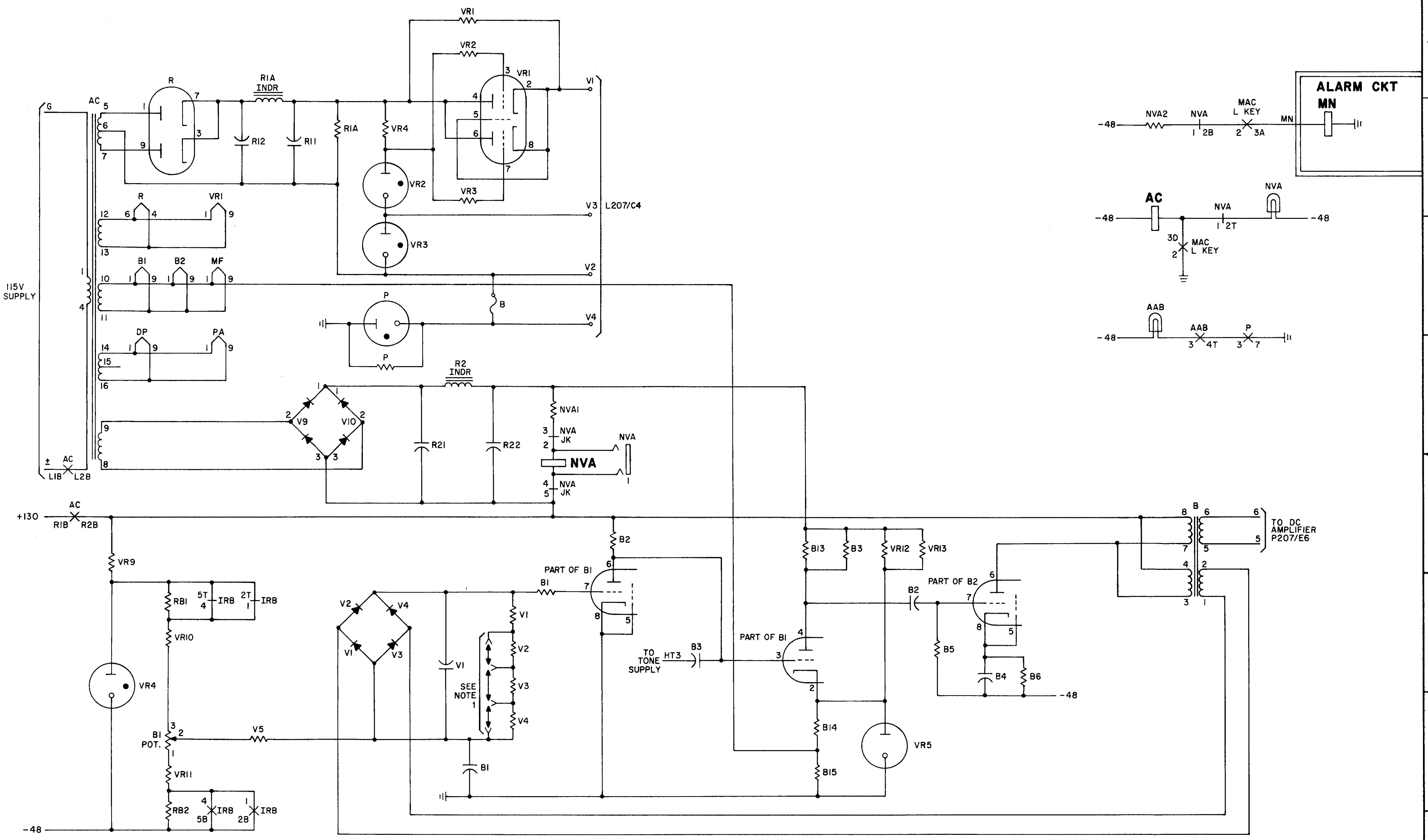
SEQUENCE CHART
MONITOR INCOMING REGISTER
OUTGOING SENDER
MF-PULSE-COUNTING

BELL TELEPHONE LABORATORIES INCORPORATED

6S

SFD-10-01-P205

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. SEE NOTE 302 ON SD-25680-01 FOR STRAPPING INFORMATION

ISSUE
5

SFD-10-01-P206

AC SUPPLY, BIAS CONTROLLER
AND NO VOLTAGE ALARM

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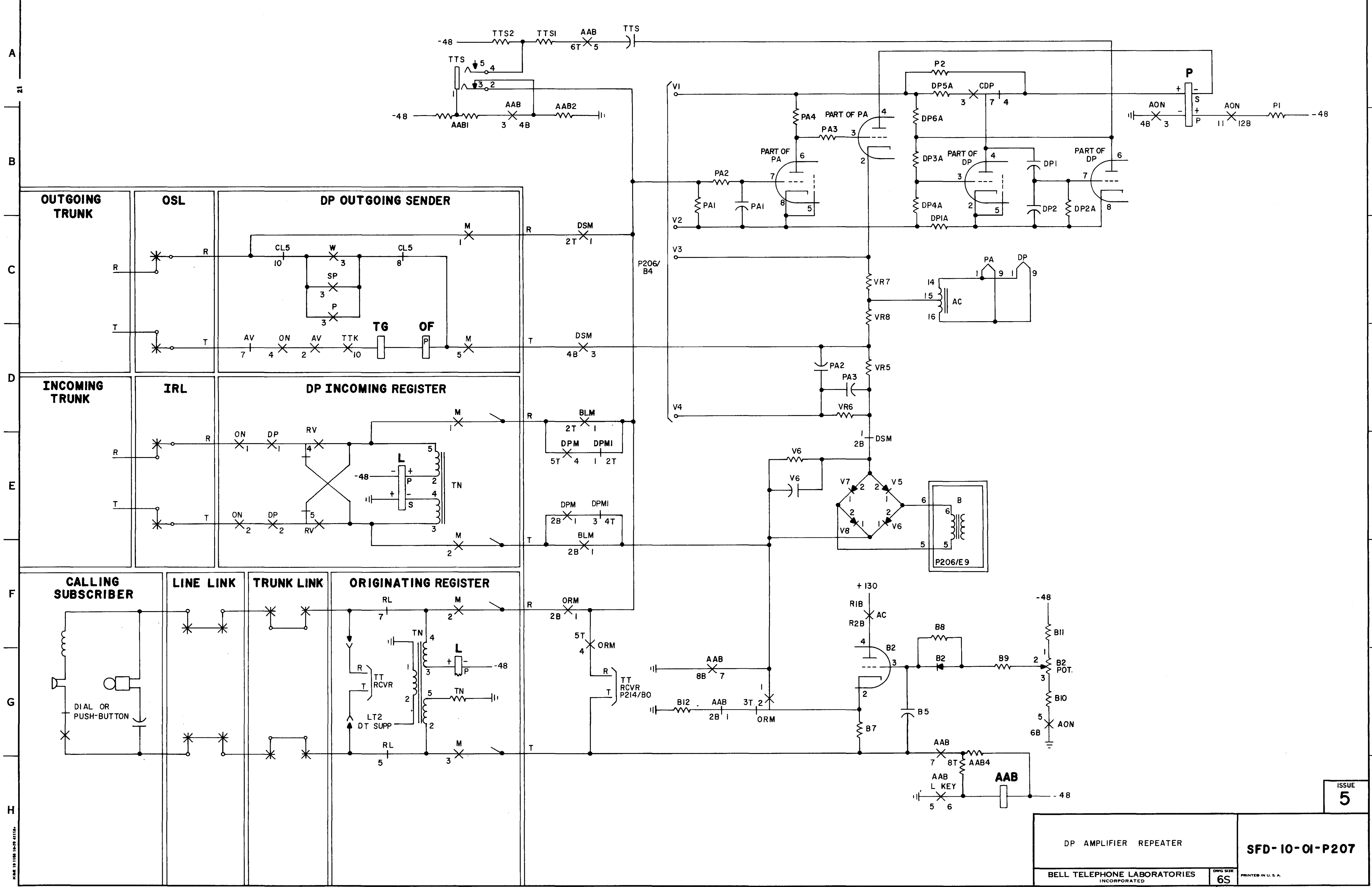
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-P206

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

DP AMPLIFIER REPEATER

SFD-10-01-P207

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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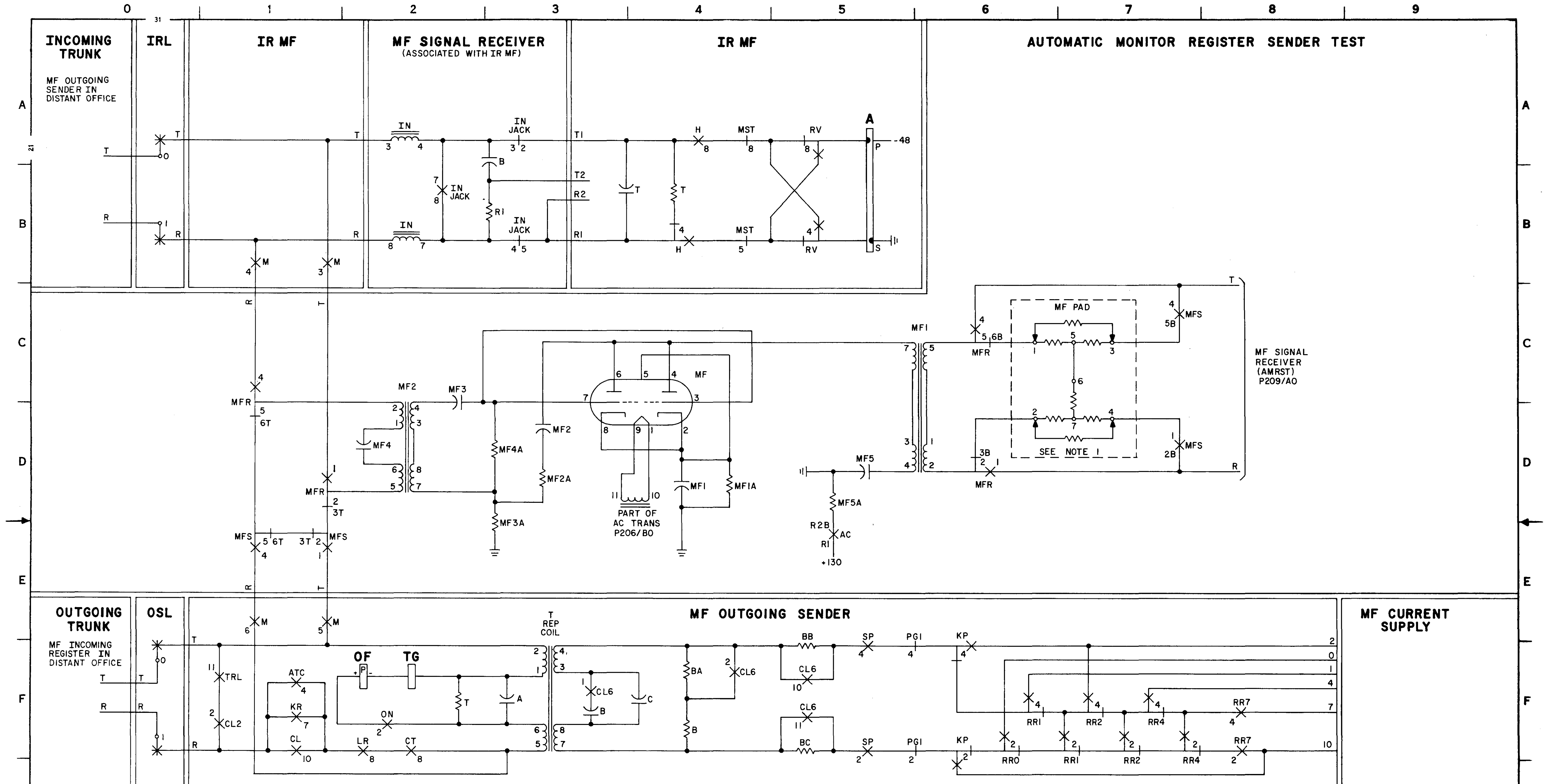
SFD-10-01-P207

E-7421 (10-71)



ISSUE
5

SFD-10-01-P208

MF PULSE
AMPLIFIER AND REPEATER

DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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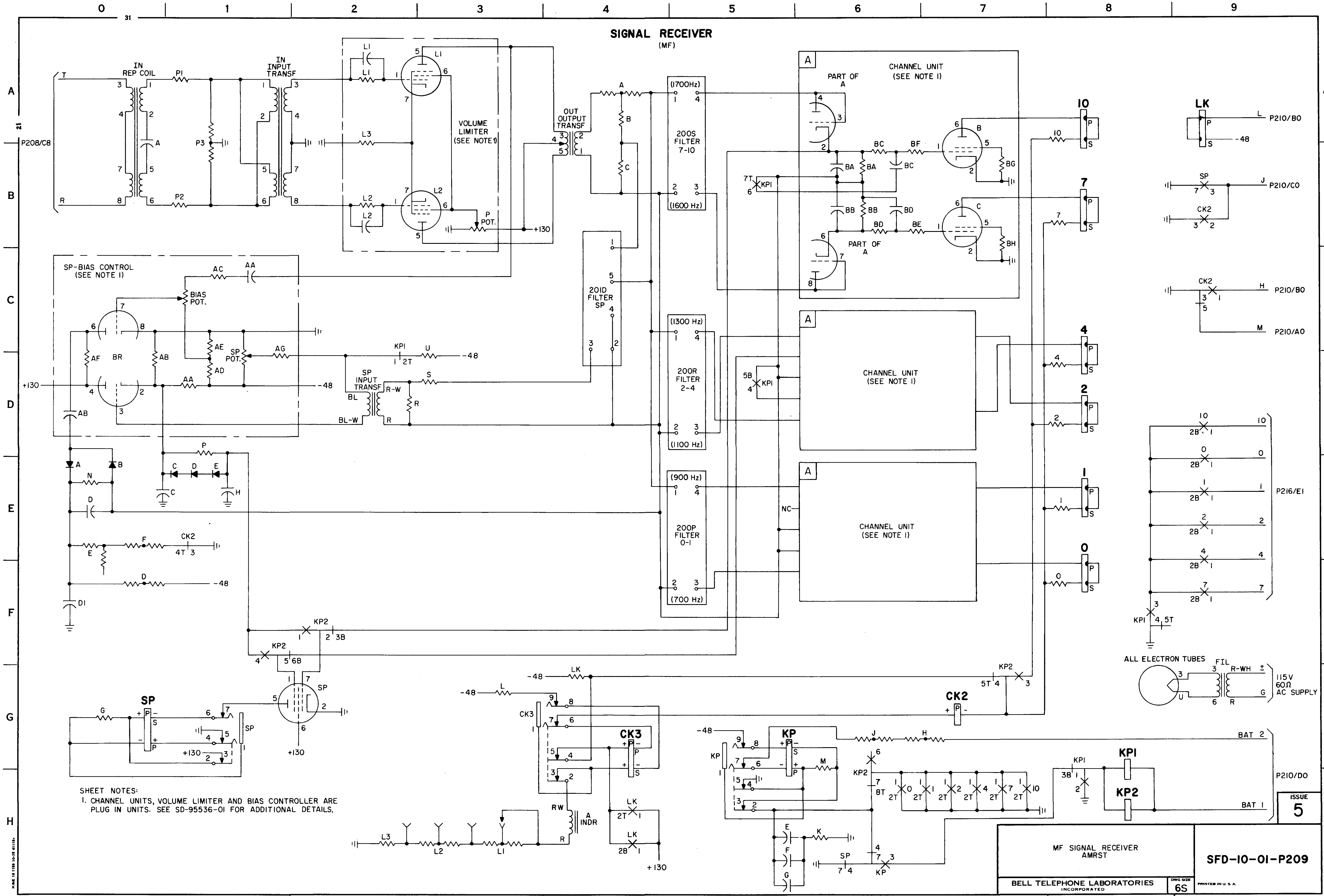
E-7481-L (4-71)

SFD-10-01-P208

SIGNAL RECEIVER
(MF)



SHEET NOTES:

1. CHANNEL UNITS, VOLUME LIMITER AND BIAS CONTROLLER ARE PLUG IN UNITS. SEE SD-95536-01 FOR ADDITIONAL DETAILS.

ISSUE 5

MF SIGNAL RECEIVER
AMRST

SFD-10-01-P209

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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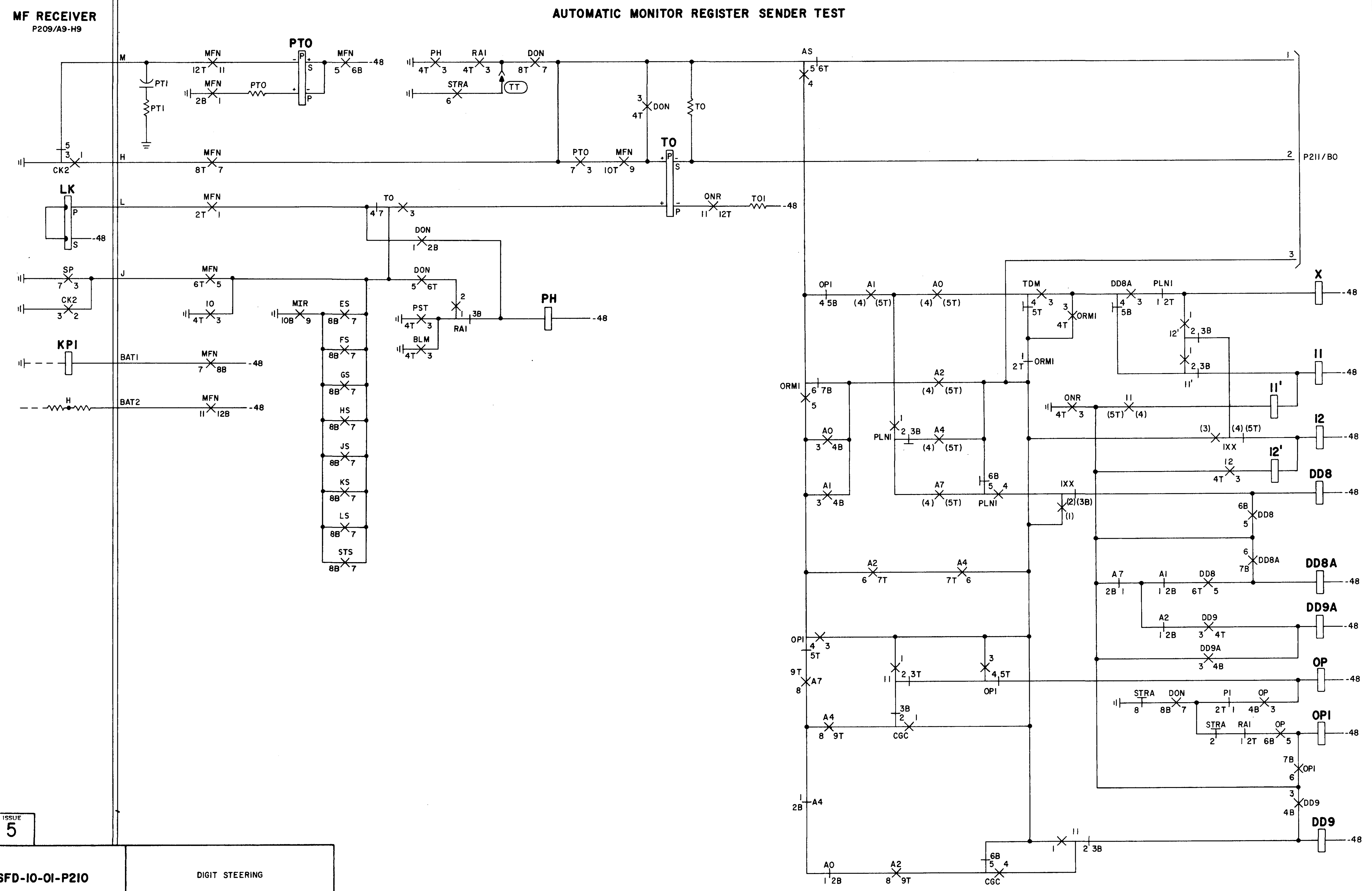
E-7421 (10-71)

SFD-10-01-P209



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5

SFD-10-01-P210

DIGIT STEERING

6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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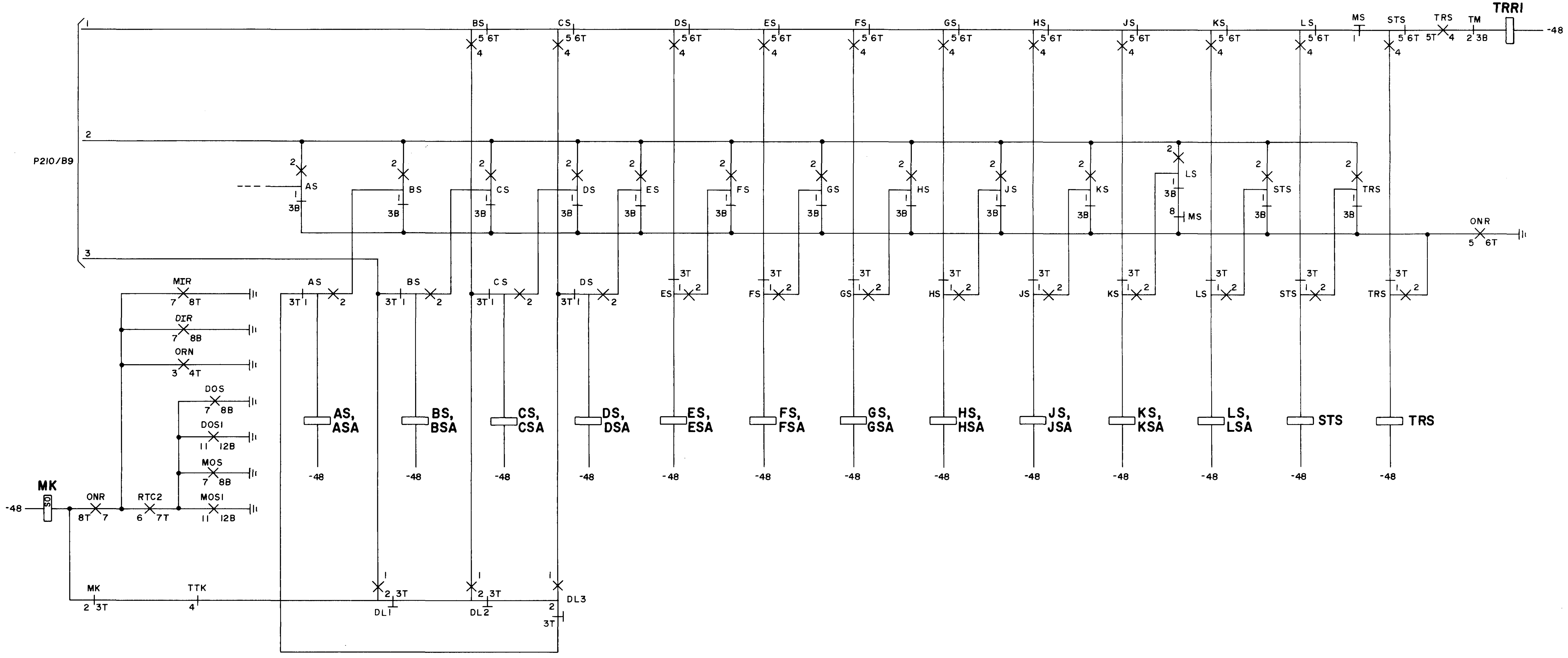
SFD-10-01-P210

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

DIGIT STEERING

SFD-10-01-P211

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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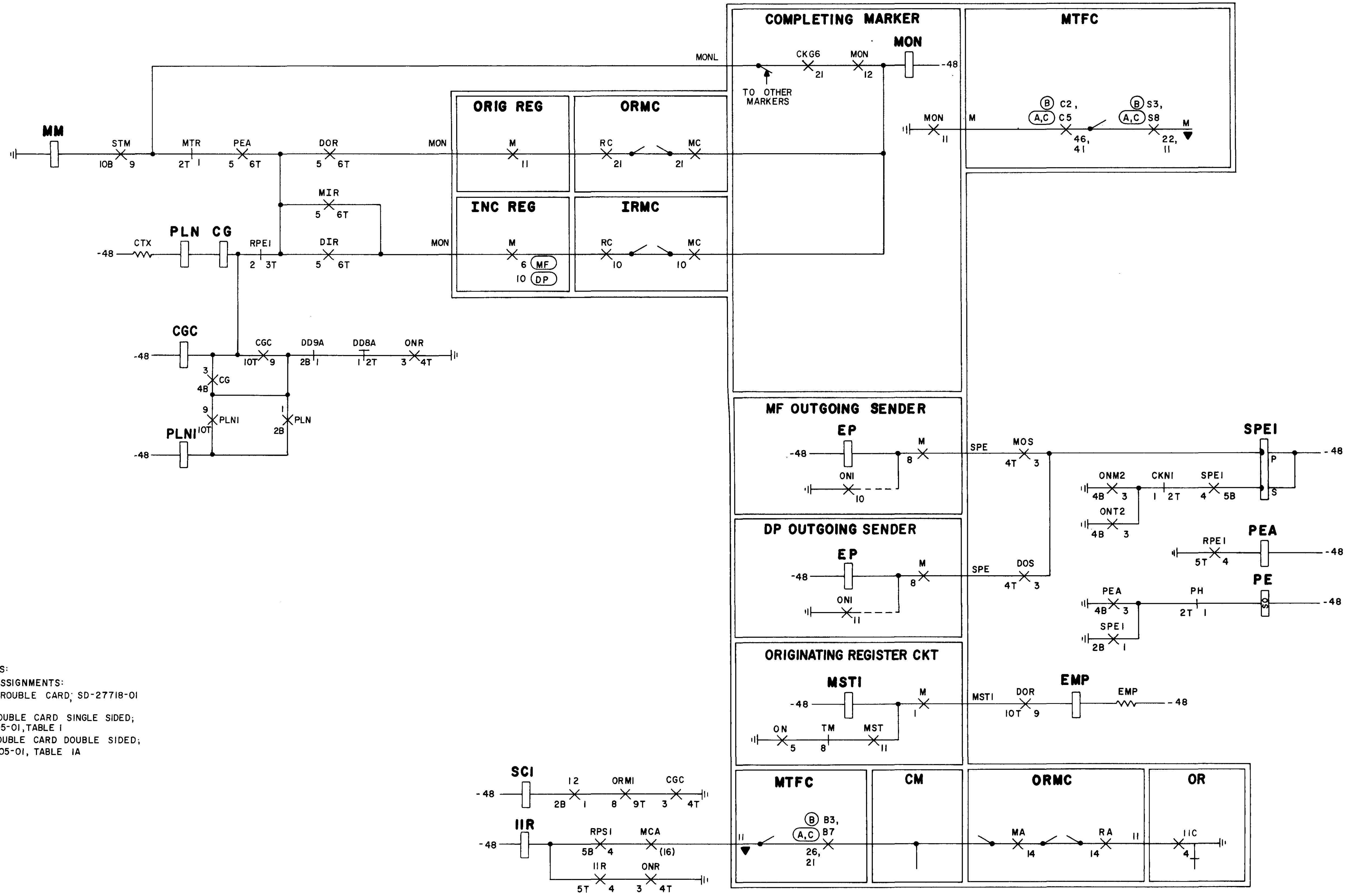
SFD-10-01-P211

E-7421 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-P212

PULSING CONTROL

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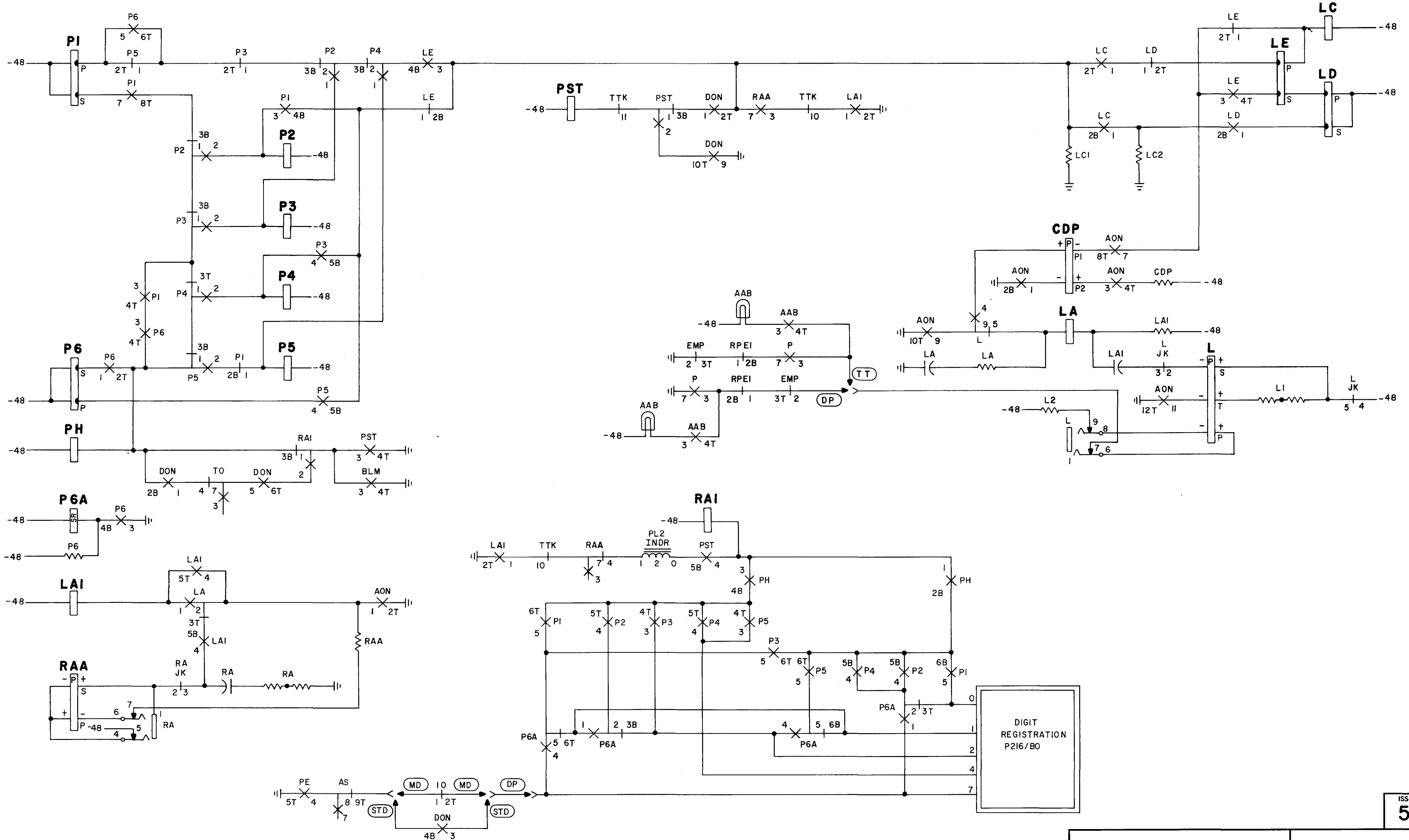
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7481-L (4-73)

SFD-10-01-P212

AUTOMATIC MONITOR REGISTER SENDER TEST



DIAL PULSE COUNTING

SFD-10-01-P213

ISSUE 5

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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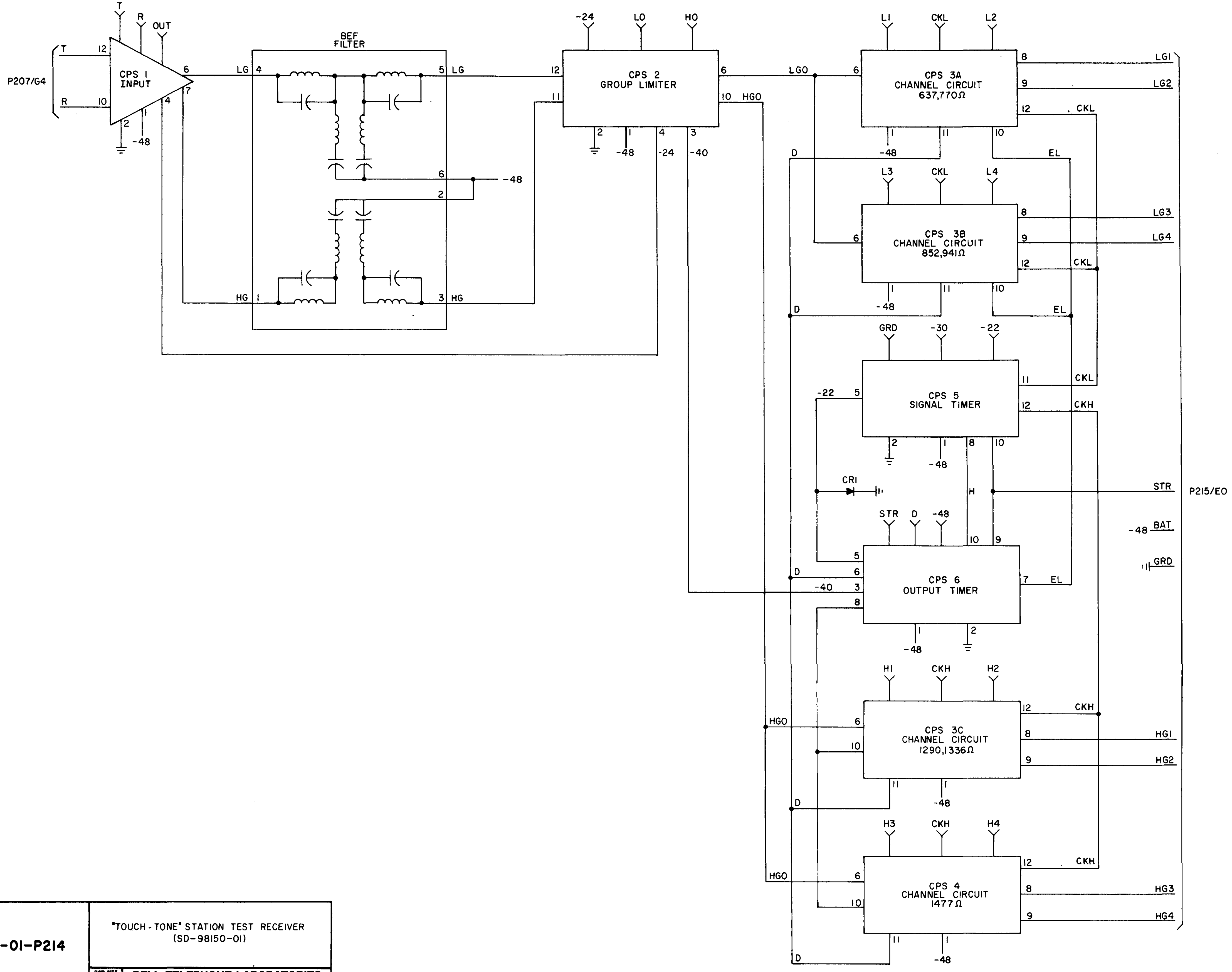
SFD-10-01-P213

E-7421 (10-71)

"TOUCH-TONE" STATION TEST RECEIVER



ISSUE
5

SFD-10-01-P214

"TOUCH-TONE" STATION TEST RECEIVER
(SD-98150-01)

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DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7421-L (4-71)

AUTOMATIC MONITOR REGISTER SENDER TEST

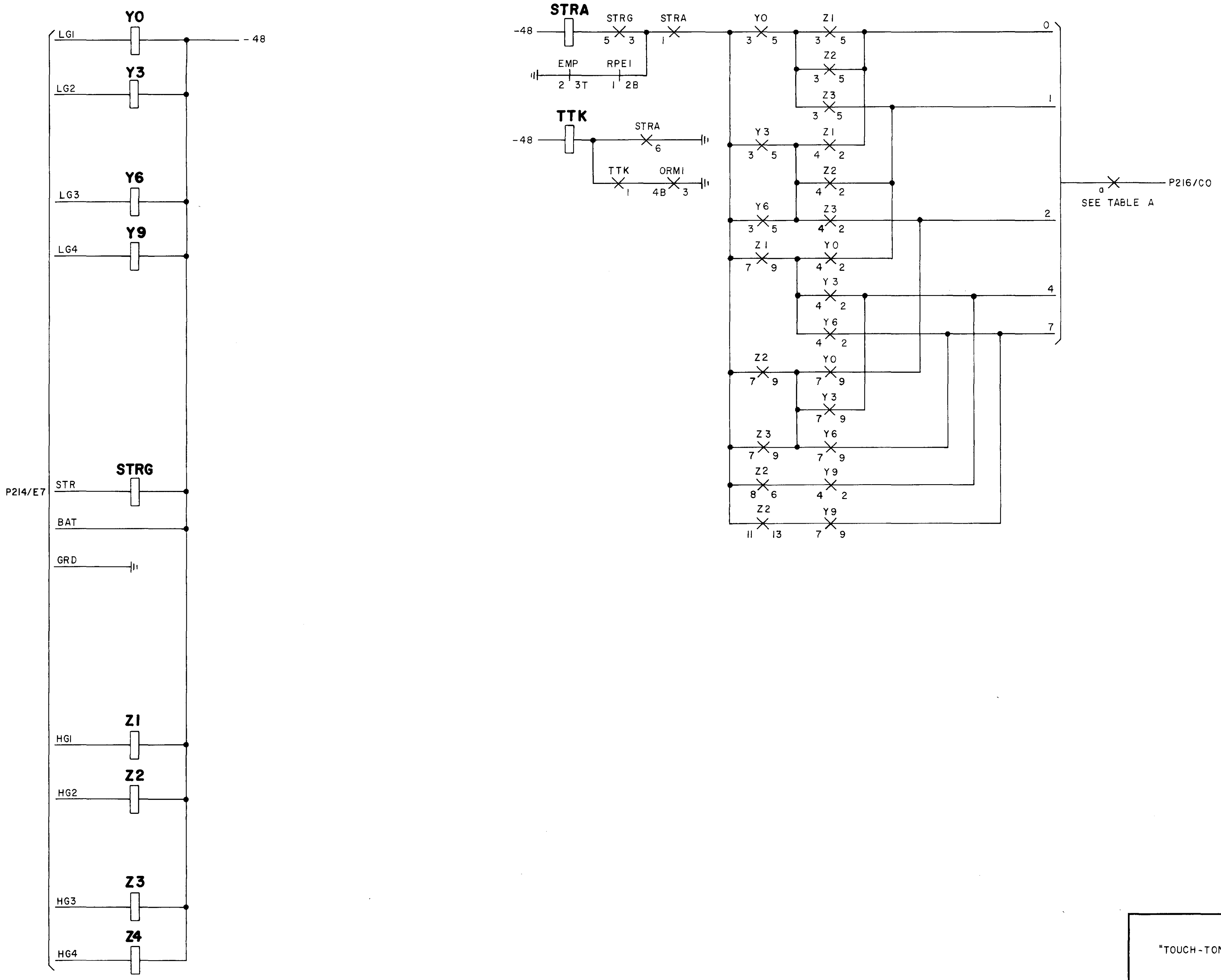

TABLE A

LEAD	CONT a	RELAY
0	5B	F1
1	1B	P6A
2	3T	P3
4	4T	F4
7	4T	P6A

ISSUE
5

"TOUCH-TONE" TRANSLATION

SFD-10-01-P215

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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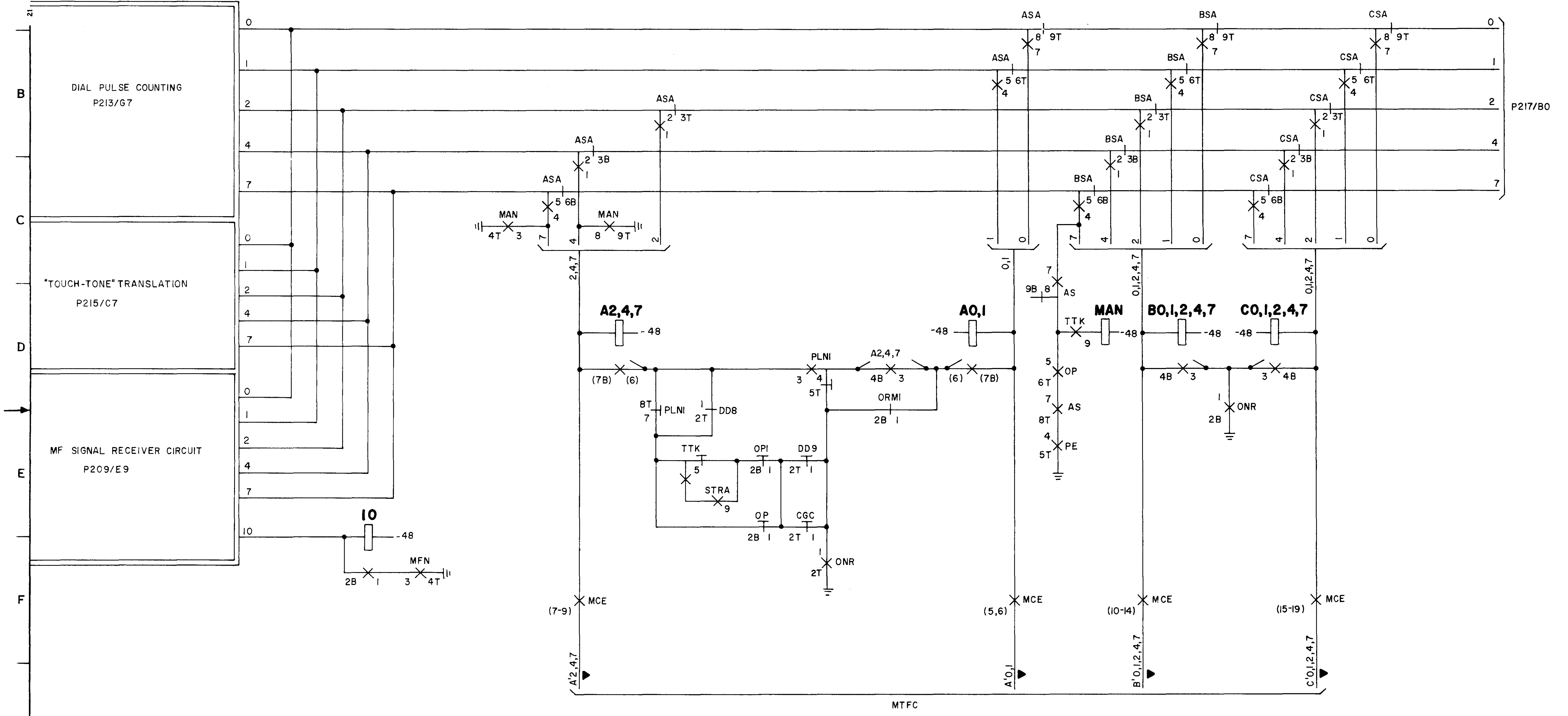
SFD-10-01-P215

E-7421 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



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SFD-10-01-P216

DIGIT REGISTRATION

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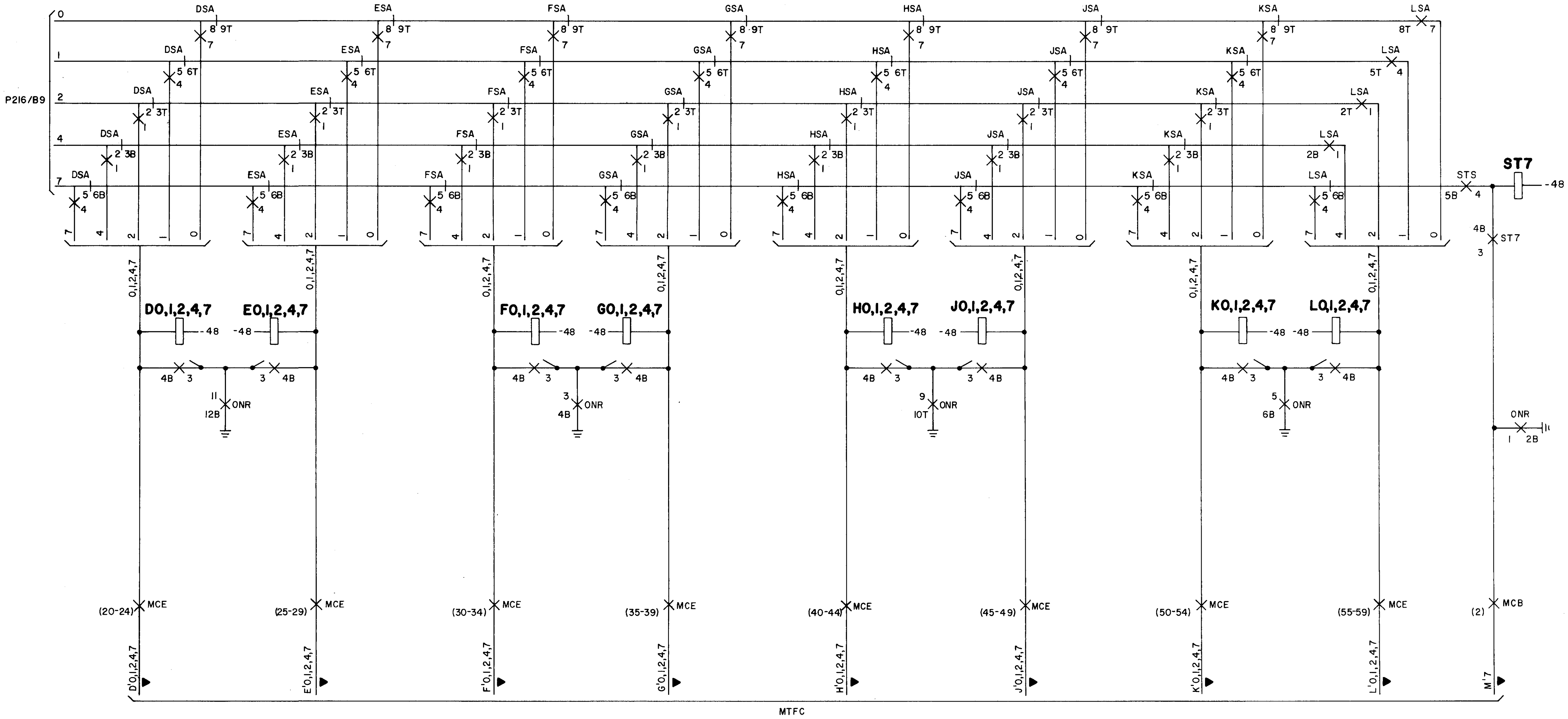
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

AUTOMATIC MONITOR REGISTER SENDER TEST



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DIGIT REGISTRATION

SFD-10-01-P217

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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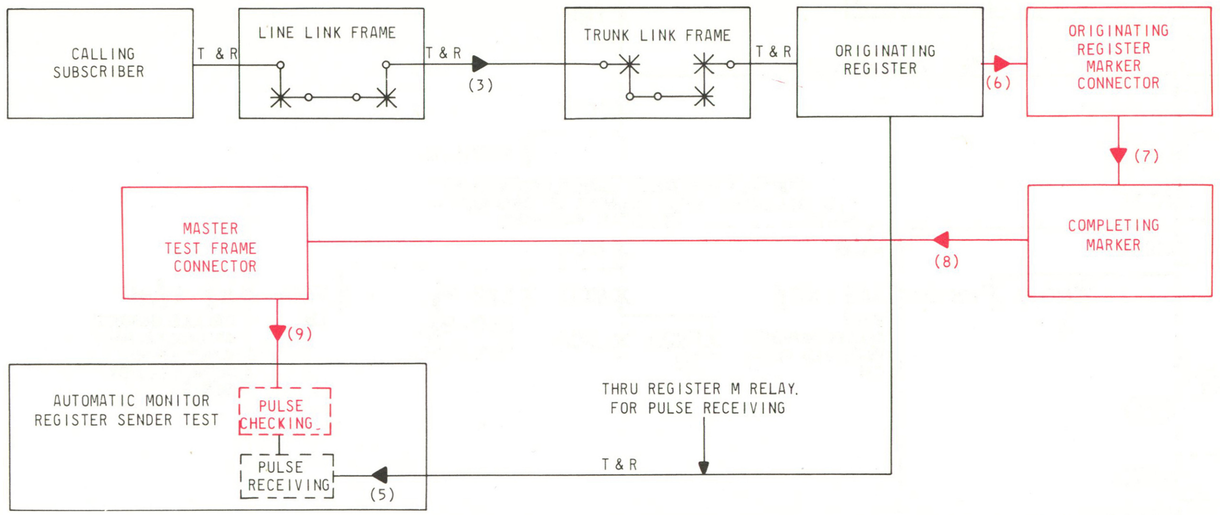
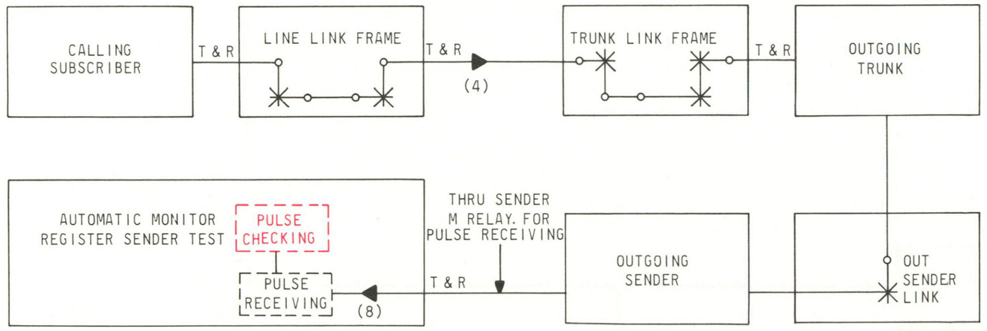
SFD-10-01-P217

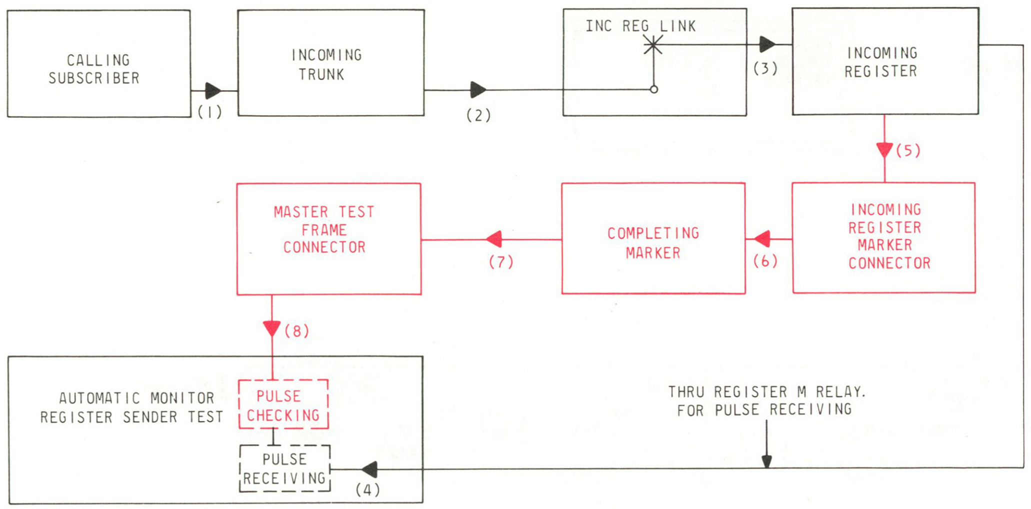
MONITORING ORIGINATING REGISTERS



MONITORING OUTGOING SENDERS



MONITORING INCOMING REGISTERS


CALLING SUBSCRIBER
(1)
INCOMING TRUNK
(2)
INC REG LINK
(3)
INCOMING REGISTER
(5)
INCOMING REGISTER MARKER CONNECTOR
(6)
COMPLETING MARKER
(7)
MASTER TEST FRAME CONNECTOR
(8)
AUTOMATIC MONITOR REGISTER SENDER TEST
PULSE CHECKING
PULSE RECEIVING
(4)
THRU REGISTER M RELAY, FOR PULSE RECEIVING

INDEX

PAGE NO.	TITLE
P301	PART P3 - PULSE CHECKING AND RELEASE
P302	SEQUENCE CHART - MONITOR ORIGINATING, INCOMING REGISTER PULSE CHECKING AND RELEASE
P303	SEQUENCE CHART - MONITOR OUTGOING SENDER PULSE CHECKING AND RELEASE
P304	SEQUENCE CHART - MONITOR ORIGINATING AND INCOMING REGISTER OUTGOING SENDER - TROUBLE RELEASE
P305	RESERVED
P306	MTFC CONTROL
P307	MONITOR TRUNK LINK AND CONNECTOR RELAY CONTROL
P308	LINE LINK LOCATION AND MARKER IDENTIFICATION
P309	TRUNK LOCATION
P310	REGISTRATION OF TANDEM TRUNK NUMBER
P311	RESERVED
P312	REGISTER OUTPUT
P313	CALLED NUMBER TRANSFER TO SENDER TRANSLATION FOR NO. GROUP SELECTION
P314	DIGIT REGISTRATION CHECK
P315	SENDER CLASS AND DELETE
P316	CONTROL AND RELEASE
P317	NO RECORD RELEASE, TROUBLE RELEASE AND PLANT REGISTERS
P318	BLOWN FUSE ALARM

CAUTION !

DUE TO THE SIMPLIFIED NATURE OF THIS DOCUMENT, INFORMATION SHOWN MAY NOT BE COMPLETE.

ISSUE
5

PART P3
PULSECHECKING AND RELEASE

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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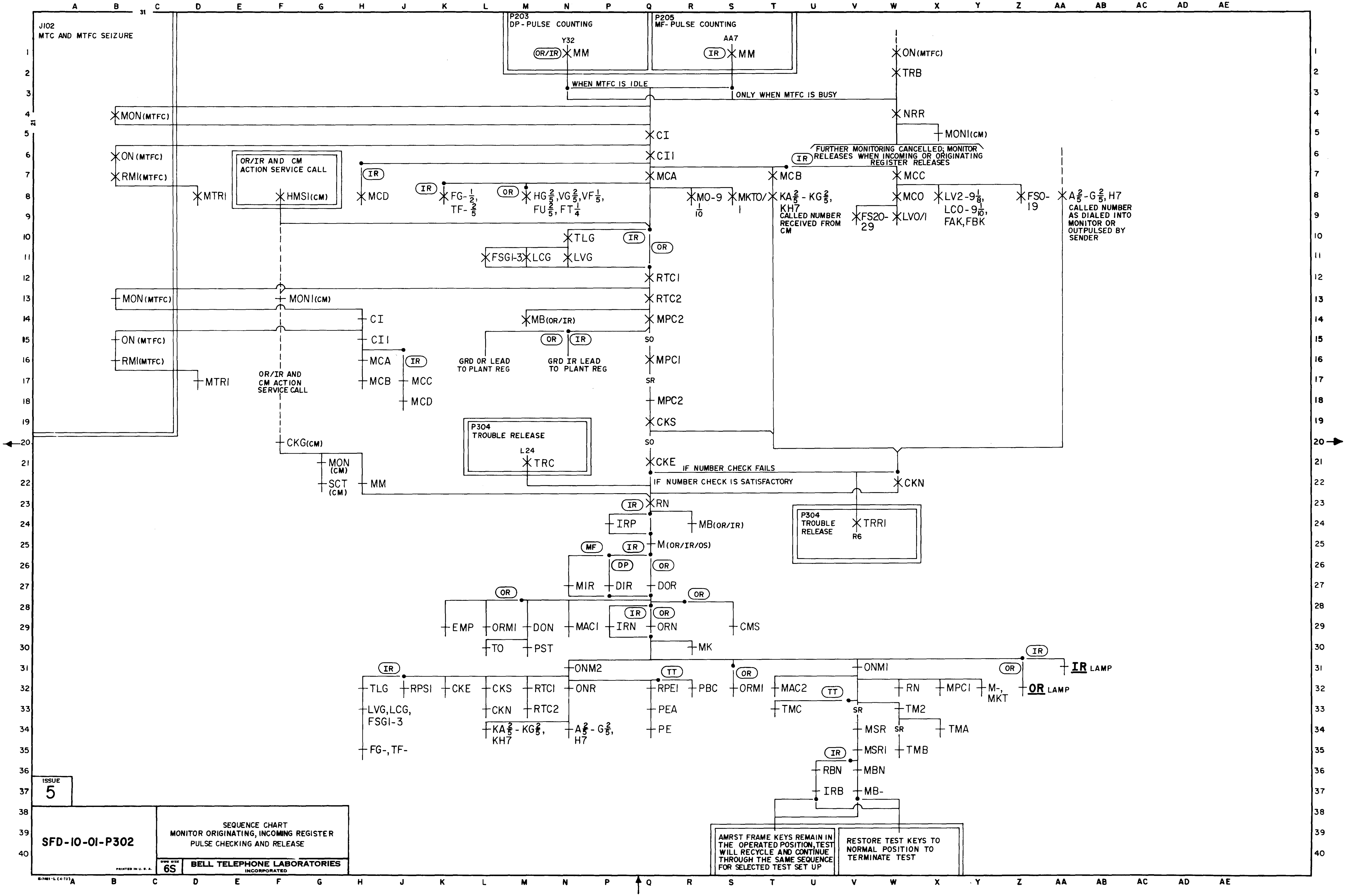
SFD-10-01-P301
2 SHEETS, SHEET 1



ISSUE
5

SFD-10-01-P302

SEQUENCE CHART
MONITOR ORIGINATING, INCOMING REGISTER
PULSE CHECKING AND RELEASE

6S

BELL TELEPHONE LABORATORIES
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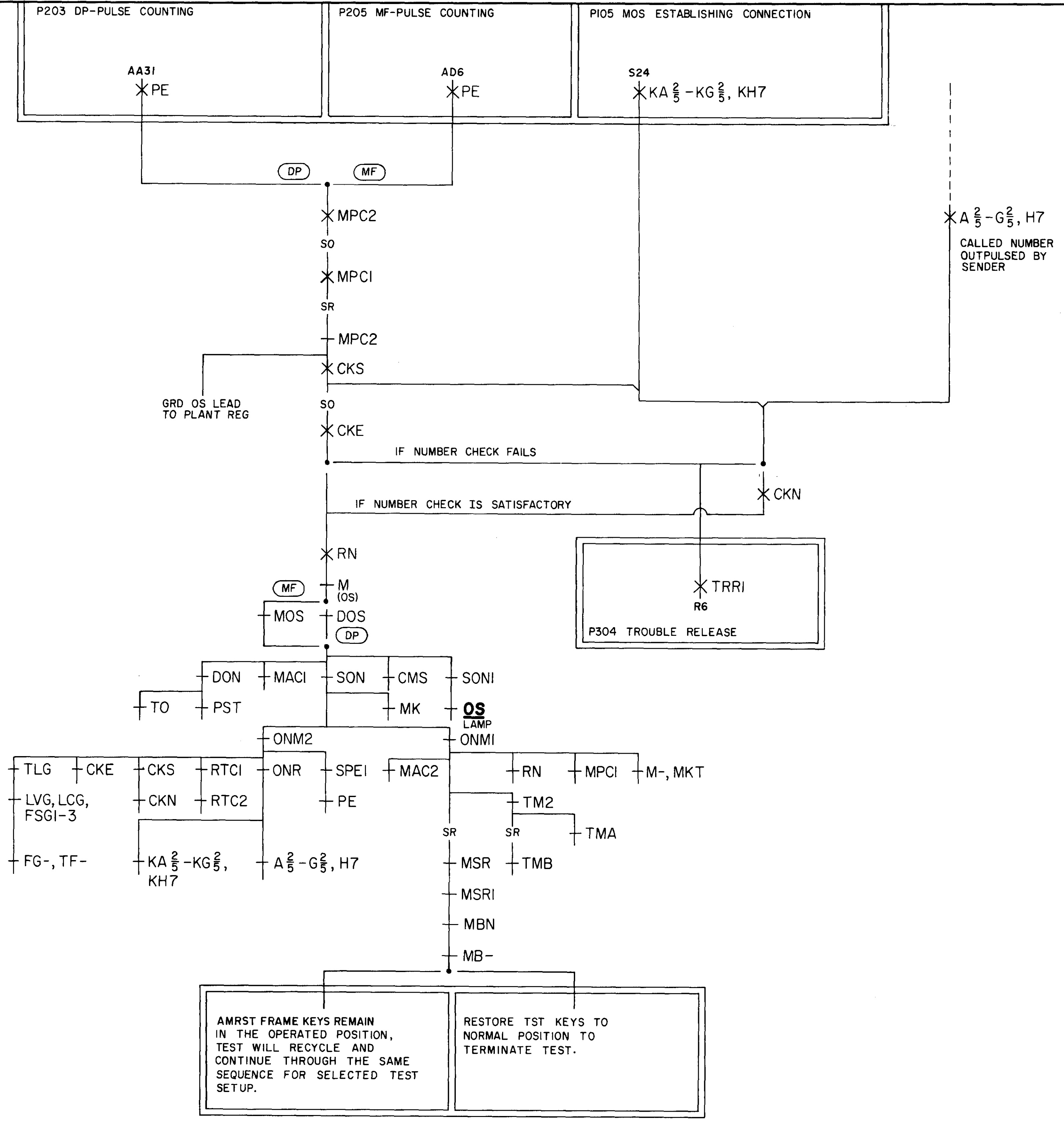
SFD-10-01-P302


P203 DP-PULSE COUNTING
AA31
PE
P205 MF-PULSE COUNTING
AD6
PE
P105 MOS ESTABLISHING CONNECTION
S24
KA $\frac{2}{5}$-KG $\frac{2}{5}$, KH7
DP
MF
MPC2
SO
MPC1
SR
MPC2
CKS
GRD OS LEAD TO PLANT REG
SO
CKE
A $\frac{2}{5}$-G $\frac{2}{5}$, H7
CALLED NUMBER OUTPULSED BY SENDER
IF NUMBER CHECK FAILS
CKN
IF NUMBER CHECK IS SATISFACTORY
RN
TRR1
R6
P304 TROUBLE RELEASE
MF
M (OS)
MOS
DOS
DP
DON
MAC1
SON
CMS
SON1
TO
PST
MK
OS LAMP
ONM2
ONM1
TLG
CKE
CKS
RTC1
ONR
SPE1
MAC2
RN
MPC1
M-, MKT
LVG, LCG, FSG1-3
CKN
RTC2
PE
TM2
SR
SR
TMA
FG-, TF-
KA $\frac{2}{5}$-KG $\frac{2}{5}$, KH7
A $\frac{2}{5}$-G $\frac{2}{5}$, H7
MSR
TMB
MSR1
MBN
MB-
AMRST FRAME KEYS REMAIN IN THE OPERATED POSITION, TEST WILL RECYCLE AND CONTINUE THROUGH THE SAME SEQUENCE FOR SELECTED TEST SETUP.
RESTORE TST KEYS TO NORMAL POSITION TO TERMINATE TEST.

ISSUE
5

SEQUENCE CHART
MONITOR OUTGOING SENDER
PULSE CHECKING AND RELEASE

SFD-10-01-P303

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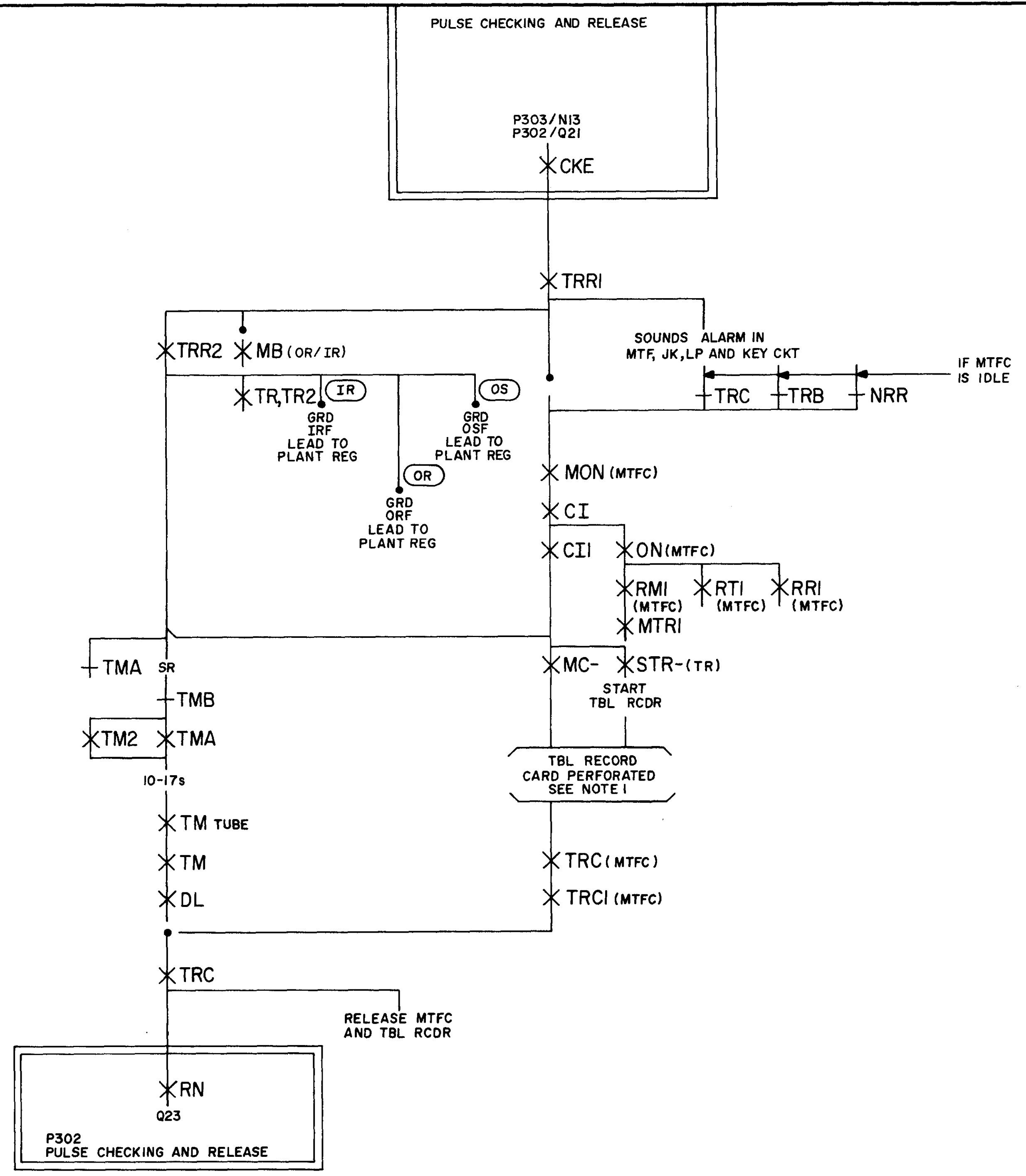
E-7421-B (10-71)

BRUNING 44-131 24092

SFD-10-01-P303



SHEET NOTES:

1.

DOUBLE SIDED 2/X TROUBLE RECORD CARD (E5488)	
PUNCH DESIGNATION	FUNCTIONAL MEANING AND LOCATION
DRT - ,DR$\left(\frac{2}{5}\right)$	MARKER NUMBER
FR - ,CN - ,RG/T - RG/U$\left(\frac{2}{5}\right)$	REGISTER LOCATION (MOR/MIR)
FR - ,CN - ,S/T - , S/U$\left(\frac{2}{5}\right)$	SENDER LOCATION
M	THE CONNECTION IS BEING MONITORED
FT - ,FU$\left(\frac{2}{5}\right)$, HG$\left(\frac{2}{5}\right)$ VG$\left(\frac{2}{5}\right)$, VF -	CALLING LINE LOCATION REGISTERED IN MONITOR (MOR/MOS)
LT	LOCAL TRANSLATION (MOR)
D/MF	TYPE LL FRAME DIAL PULSE/ MULTIFREQUENCY PULSE (MOR)
PK	PARTIAL DIAL AND PERMANENT SIGNAL CHECK (MOR)
OR	ORIGINATING CLASS (MOR)
FS/T - ,FS/U$\left(\frac{2}{5}\right)$, FAK, FBK, LV$\left(\frac{2}{5}\right)$, LC$\left(\frac{2}{5}\right)$	OUTGOING TRUNK LOCATION (MOS)
FG - ,TF -$\left(\frac{2}{5}\right)$	INCOMING TRUNK LOCATION (MIR)
OA/OB, TCA/B, INC	CLASS RECORDED IN IR (MIR)
A-G$\left(\frac{2}{5}\right)$ H7	THE CODE DIGITS TRANSMITTED TO THE MONITOR BY THE MARKER
A' - G'$\left(\frac{2}{5}\right)$, H'7	THE CODE DIGITS REGISTERED IN THE MONITOR BY MONITORING ON THE PULSING LEADS OF EITHER AN OUTGOING SENDER, ORIGINATING OR INCOMING REGISTER.
MOR,MIR,MOS	AUTOMATIC MONITOR WAS CONNECTED TO AN ORIGINATING REGISTER, INCOMING REGISTER OR AN OUTGOING SENDER.

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5

SFD-10-01-P304

SEQUENCE CHART
MONITOR ORIGINATING AND INCOMING
REGISTER, OUTGOING SENDER
TROUBLE RELEASE

DWG SIZE 6S

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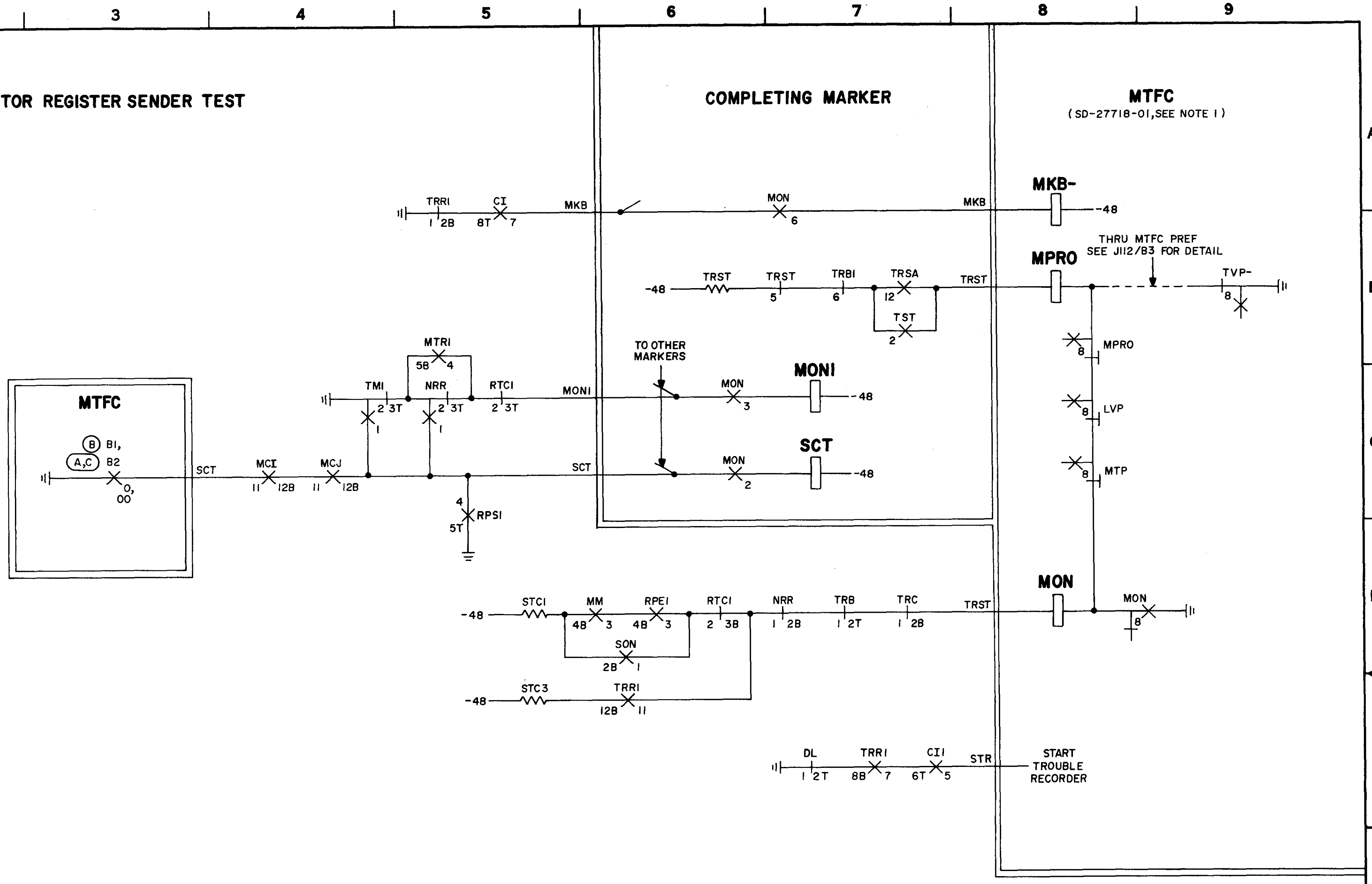
AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. FOR MTFC SD-25805-01 OPERATION, SEE PART J1
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-P306

MTFC CONTROL

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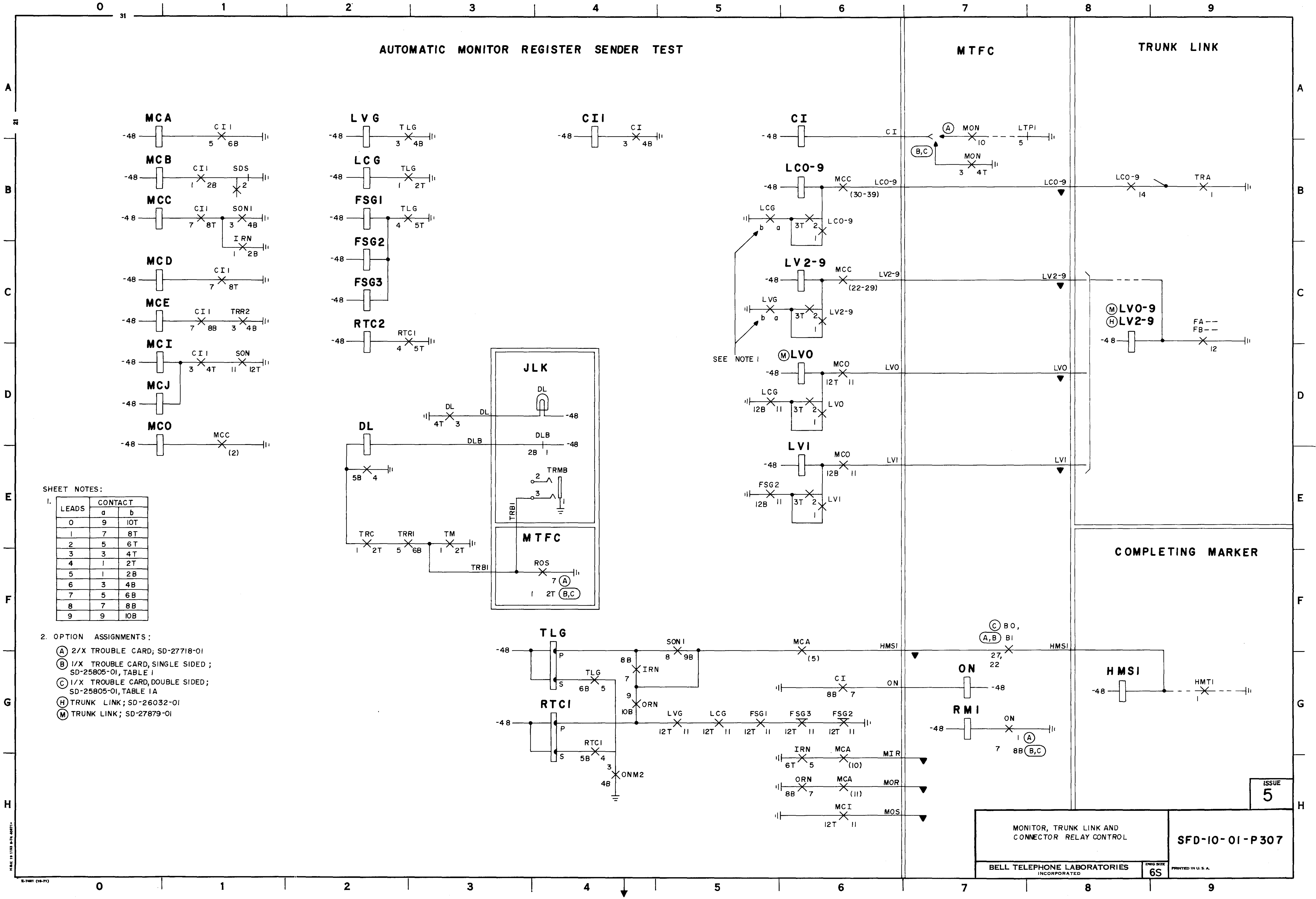
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED


AUTOMATIC MONITOR REGISTER SENDER TEST
MTFC
TRUNK LINK
COMPLETING MARKER
MCA -48 CI1 5 6B
MCB -48 CI1 1 2B SDS 2
MCC -48 CI1 7 8T SON1 3 4B IRN 1 2B
MCD -48 CI1 7 8T
MCE -48 CI1 7 8B TRR2 3 4B
MCI -48 CI1 3 4T SON 11 12T
MCJ -48
MCO -48 MCC (2)
LVG -48 TLG 3 4B
LCG -48 TLG 1 2T
FSG1 -48 TLG 4 5T
FSG2 -48
FSG3 -48
RTC2 -48 RTC1 4 5T
CI1 -48 CI 3 4B
CI -48 CI Ⓐ MON 10 LTP1 5 (B,C) MON 3 4T
LC0-9 -48 MCC (30-39) LC0-9 LCG b a 3T 2 1 LC0-9
LV2-9 -48 MCC (22-29) LV2-9 LVG b a 3T 2 1 LV2-9
SEE NOTE 1
Ⓜ LV0 -48 MCO 12T 11 LV0 LCG 12B 11 3T 2 1 LV0
LV1 -48 MCO 12B 11 LV1 FSG2 12B 11 3T 2 1 LV1
LC0-9 14 TRA 1
Ⓜ LV0-9 Ⓗ LV2-9 -48 FA-- FB-- 12
JLK DL DL 4T 3 DL -48
DL DLB DLB 2B 1 -48 5B 4
TRMB 2 3 1 TRB1
TRC 1 2T TRR1 5 6B TM 1 2T
MTFC ROS TRB1 7 Ⓐ 1 2T (B,C)
TLG -48 P S TLG 6B 5 SON1 8 9B 8B IRN 7 9 ORN 10B MCA (5) HMS1
RTC1 -48 P S RTC1 5B 4 3 ONM2 4B
LVG 12T 11 LCG 12T 11 FSG1 12T 11 FSG3 12T 11 FSG2 12T 11
CI 8B 7 ON
Ⓒ B0, (A,B) B1 27, 22 HMS1
ON -48
RM1 -48 ON 1 Ⓐ 7 8B (B,C)
HMS1 -48 HMT1 1
IRN 6T 5 MCA (10) MIR
ORN 8B 7 MCA (11) MOR
MC1 12T 11 MOS
0 1 2 3 4 5 6 7 8 9
A B C D E F G H

SHEET NOTES:

1.

LEADS	CONTACT	
	a	b
0	9	10T
1	7	8T
2	5	6T
3	3	4T
4	1	2T
5	1	2B
6	3	4B
7	5	6B
8	7	8B
9	9	10B

2. OPTION ASSIGNMENTS:

- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE I
- Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE IA
- Ⓗ TRUNK LINK; SD-26032-01
- Ⓜ TRUNK LINK; SD-27879-01

ISSUE 5

MONITOR, TRUNK LINK AND CONNECTOR RELAY CONTROL

SFD-10-01-P307

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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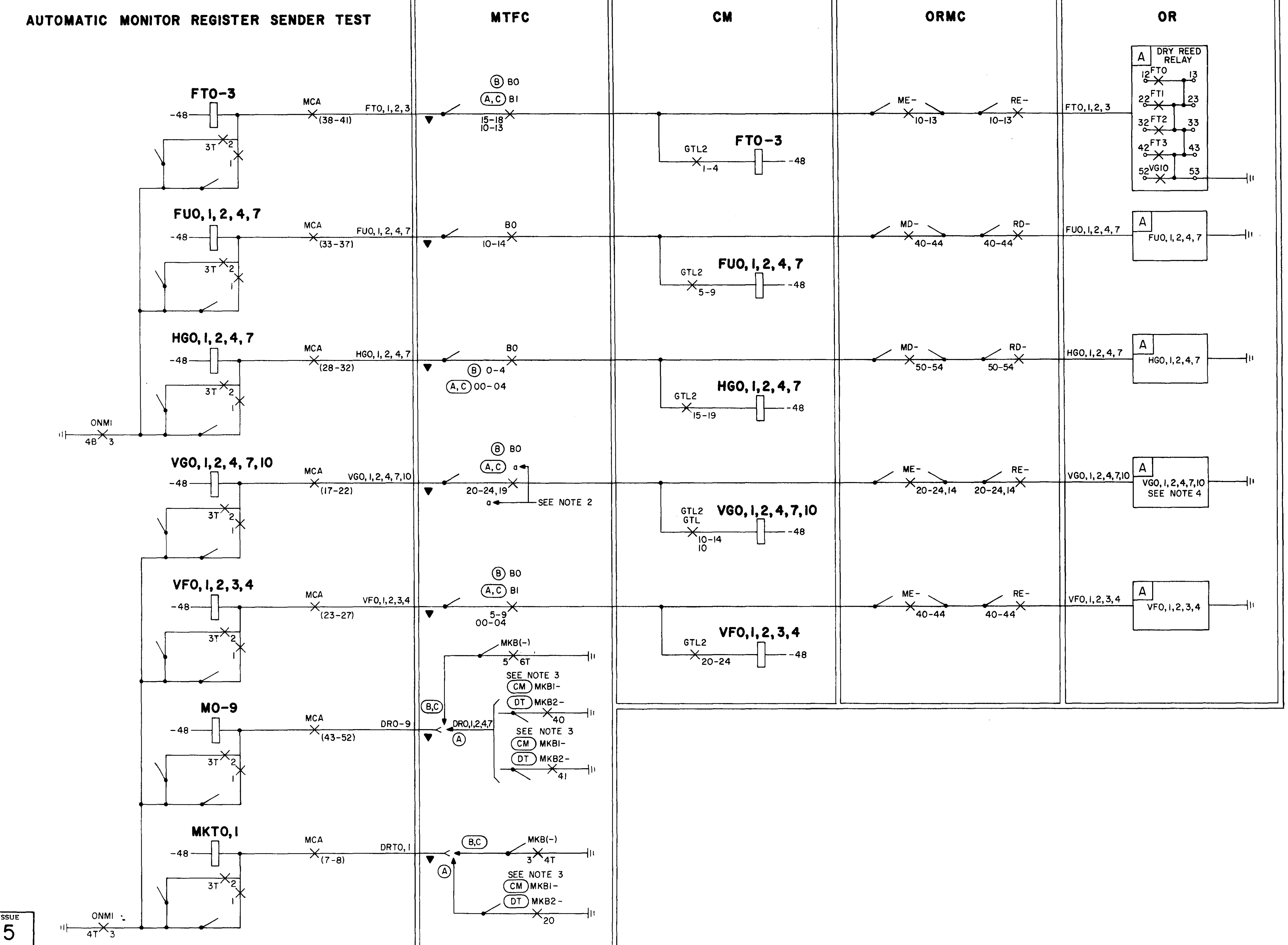
SFD-10-01-P307

E-7481 (10-71)

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A
2. a-SEE SD-25805-01, TABLE 1A AND SD-27718-01, TABLE 1 FOR CONTACT ARRANGEMENT AND DESIGNATIONS.
3.

MKB1 MKB2 RELAY	CONT 20	CONT 40	CONT 41
0	DRT 0	DR 4	DR 7
1	0	0	1
2	0	0	2
3	0	1	2
4	0	0	4
5	0	1	4
6	0	2	4
7	0	0	7
8	0	1	7
9	0	2	7
10	1	4	7
11	1	0	1

4. VG10 DRY REED LOCATED ON THE FT- DRY REED PACK

ISSUE
5

SFD-10-01-P308

LINE LINK LOCATION AND
MARKER IDENTIFICATION

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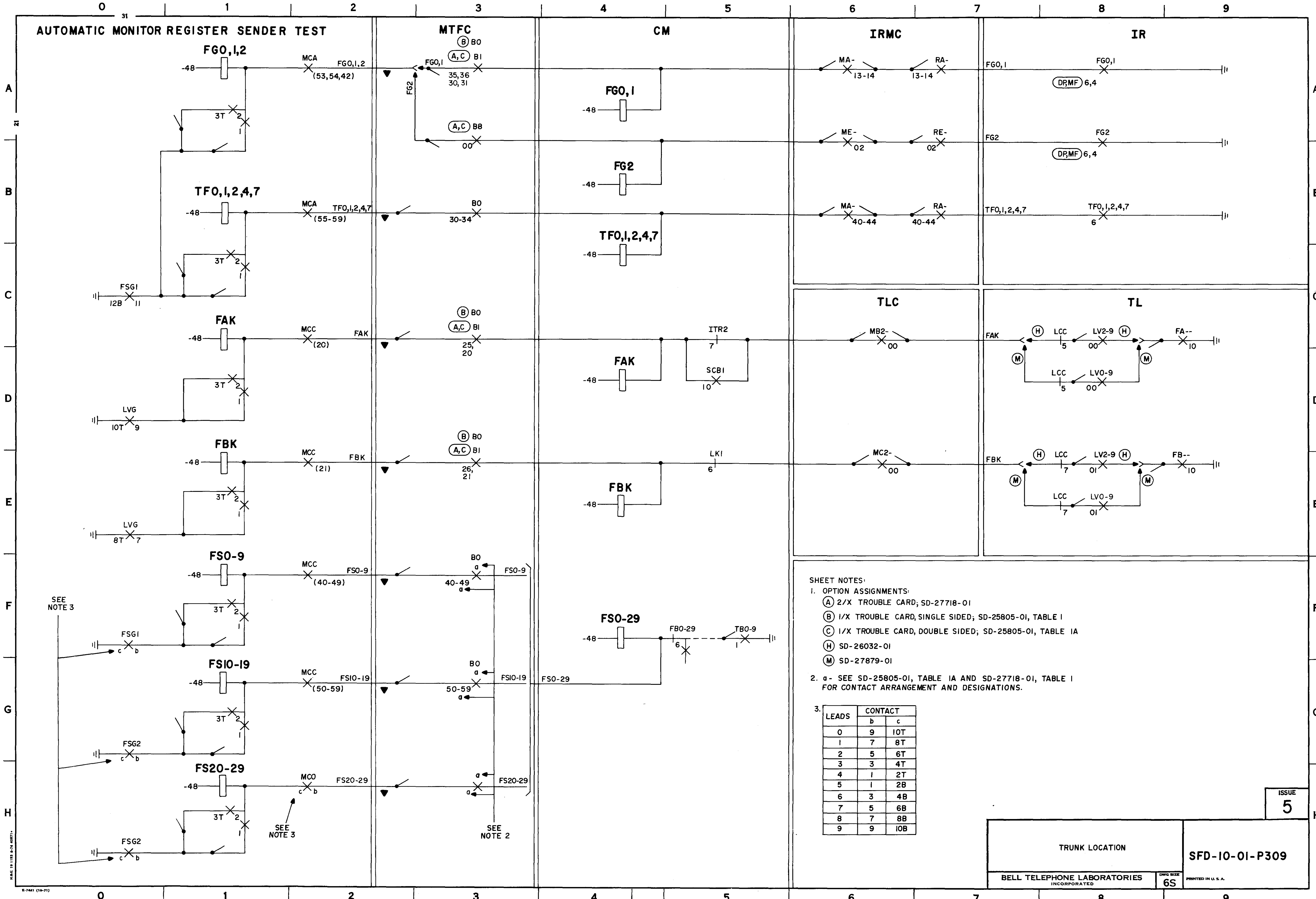
DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED

E-7487-L (4-77)



SHEET NOTES:

1. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE I
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE IA
   - Ⓗ SD-26032-01
   - Ⓜ SD-27879-01
2. a - SEE SD-25805-01, TABLE IA AND SD-27718-01, TABLE I FOR CONTACT ARRANGEMENT AND DESIGNATIONS.
3.

LEADS	CONTACT	
	b	c
0	9	10T
1	7	8T
2	5	6T
3	3	4T
4	1	2T
5	1	2B
6	3	4B
7	5	6B
8	7	8B
9	9	10B

ISSUE
5

TRUNK LOCATION

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

SFD-10-01-P309

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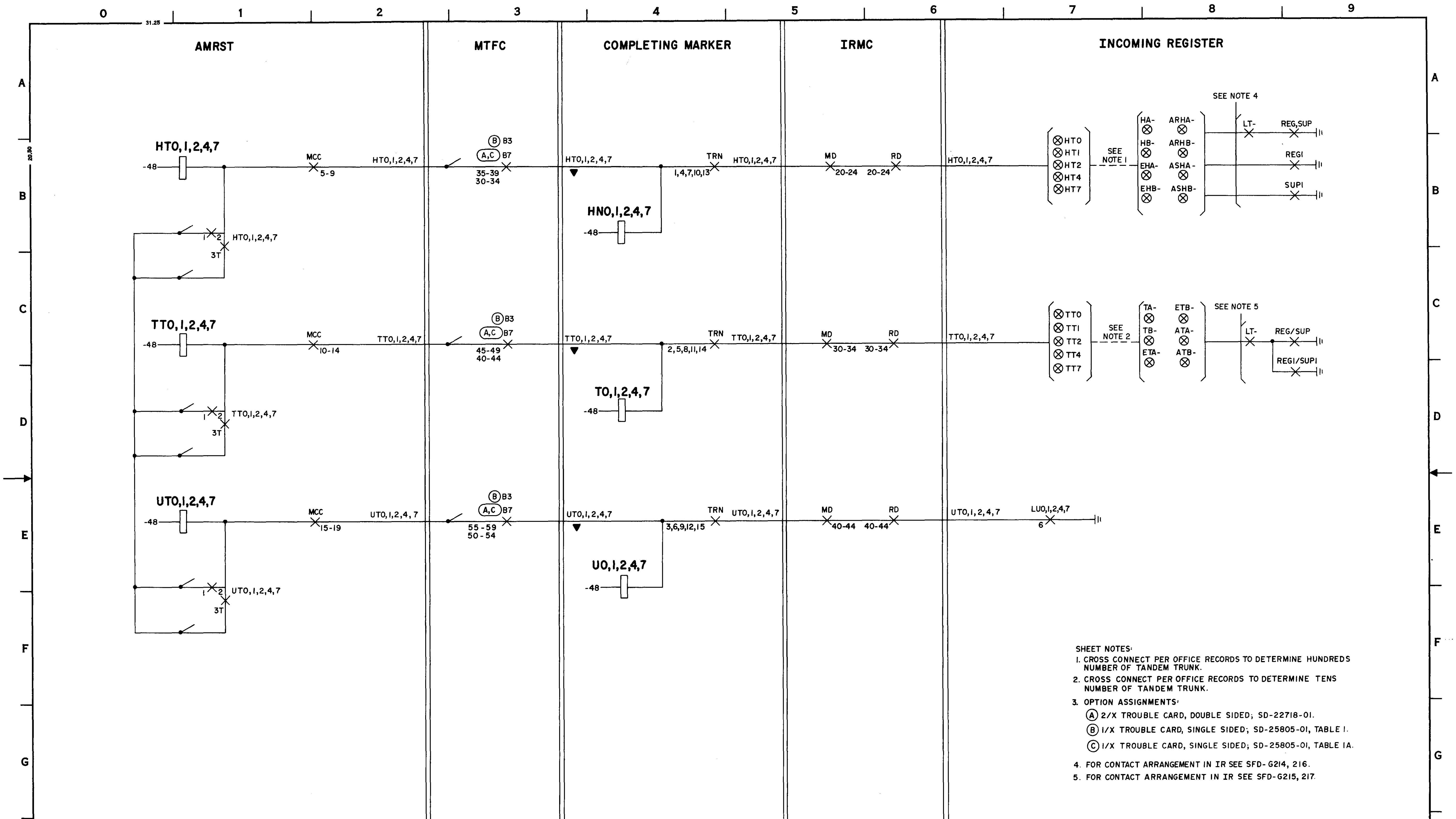
E-7441 (10-71)

SFD-10-01-P309

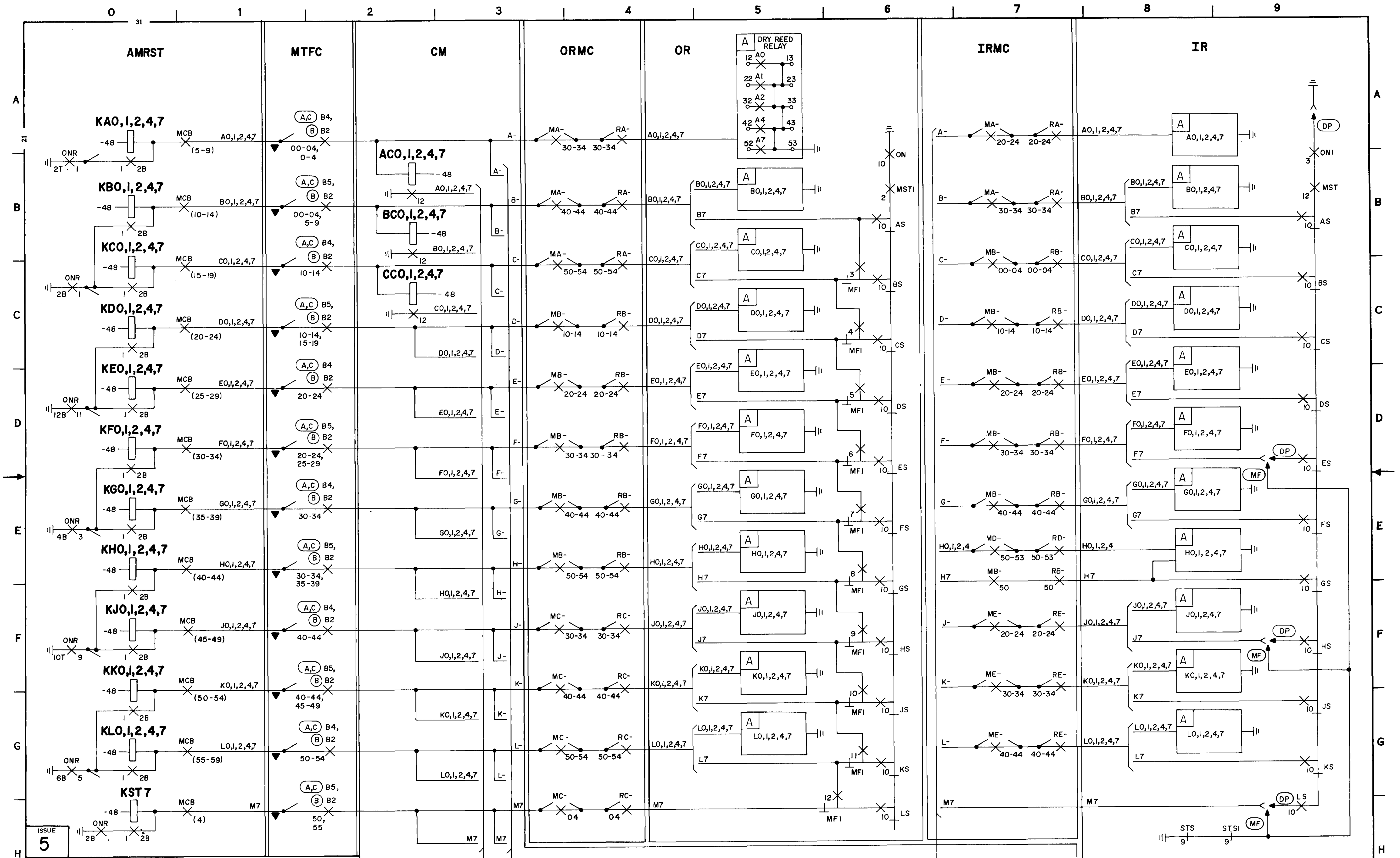


SHEET NOTES:

1. CROSS CONNECT PER OFFICE RECORDS TO DETERMINE HUNDREDS NUMBER OF TANDEM TRUNK.
2. CROSS CONNECT PER OFFICE RECORDS TO DETERMINE TENS NUMBER OF TANDEM TRUNK.
3. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD, DOUBLE SIDED; SD-22718-01.
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1.
   - Ⓒ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1A.
4. FOR CONTACT ARRANGEMENT IN IR SEE SFD-G214, 216.
5. FOR CONTACT ARRANGEMENT IN IR SEE SFD-G215, 217.

ISSUE 5	DWG SIZE 6S	REGISTRATION OF TANDEM TRUNK NUMBER (IR MF)
SFD-10-01-	P310	BELL LABORATORIES

SFD-10-01-P310



SHEET NOTES:
1. OPTION ASSIGNMENTS:
Ⓐ 2/X TROUBLE CARD; SD-27718-01
Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1
Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-P312

REGISTER OUTPUT

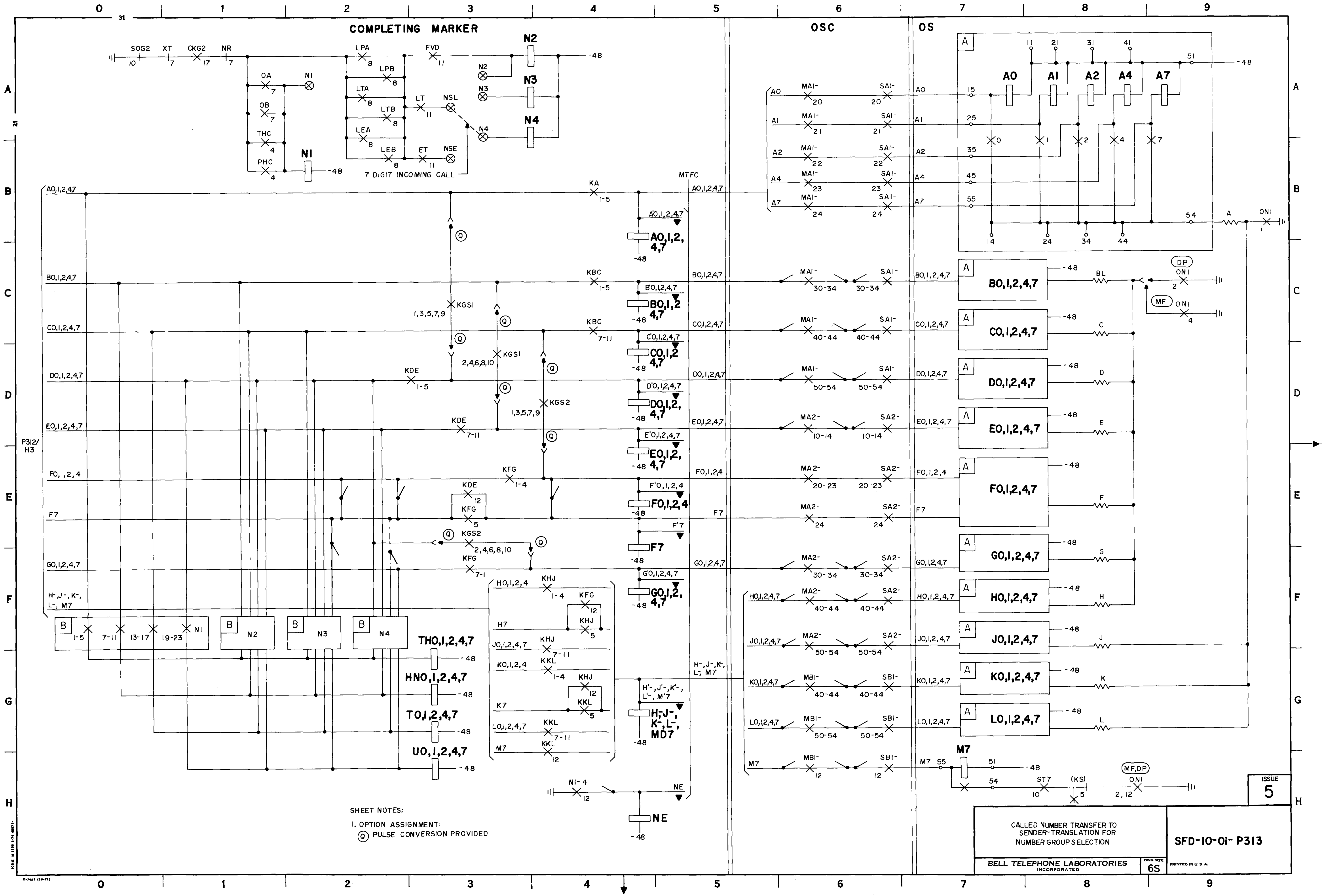
DWG SIZE 6S

BELL TELEPHONE LABORATORIES
INCORPORATED

PRINTED IN U.S.A.

E-7461-L (4-72)

SFD-10-01-P312



SHEET NOTES:

1. OPTION ASSIGNMENT:
Ⓠ PULSE CONVERSION PROVIDED

CALLED NUMBER TRANSFER TO SENDER-TRANSLATION FOR NUMBER GROUP SELECTION

SFD-10-01- P313

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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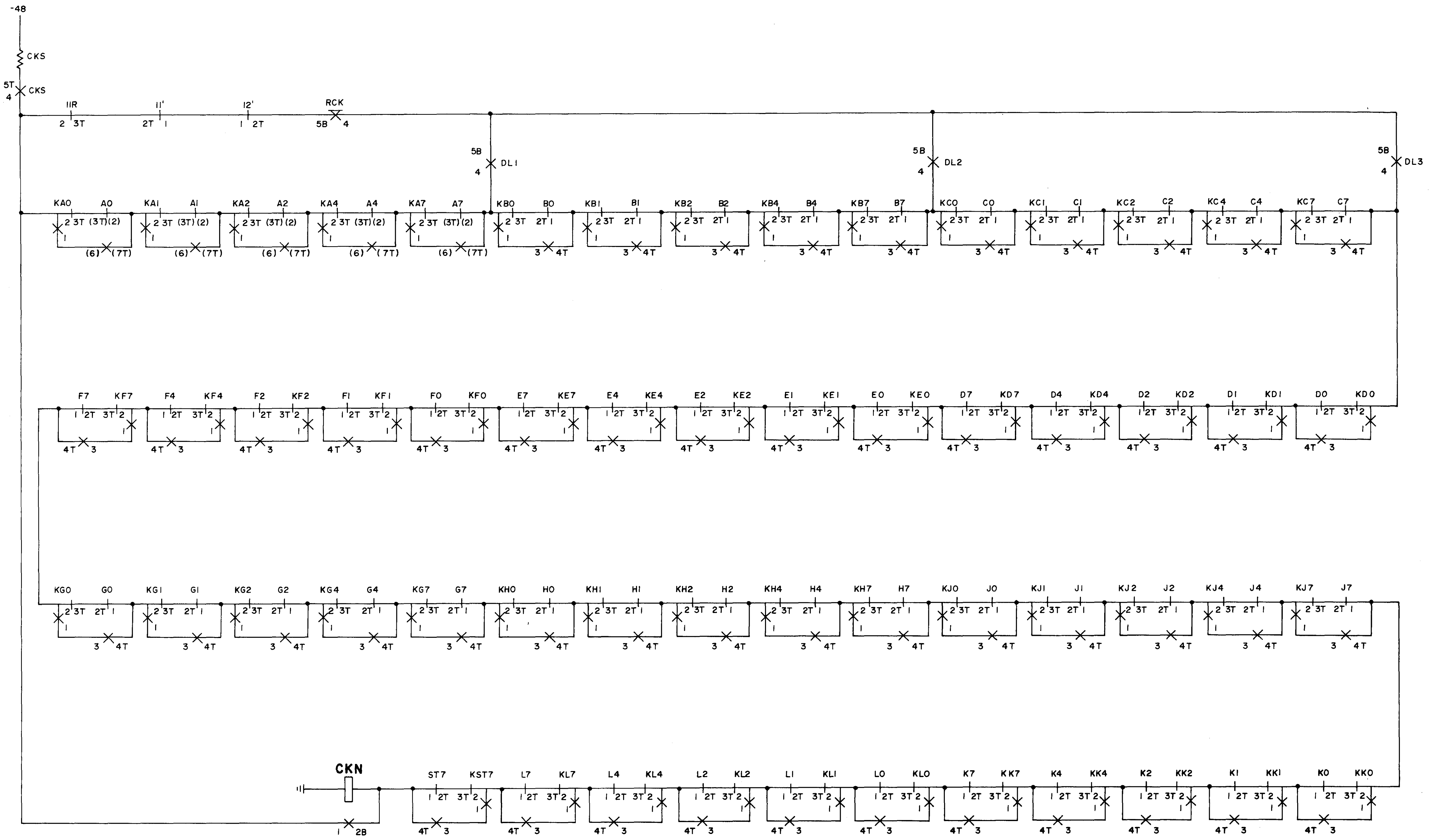
ISSUE 5

SFD-10-01-P313

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-P314

DIGIT REGISTRATION CHECK

6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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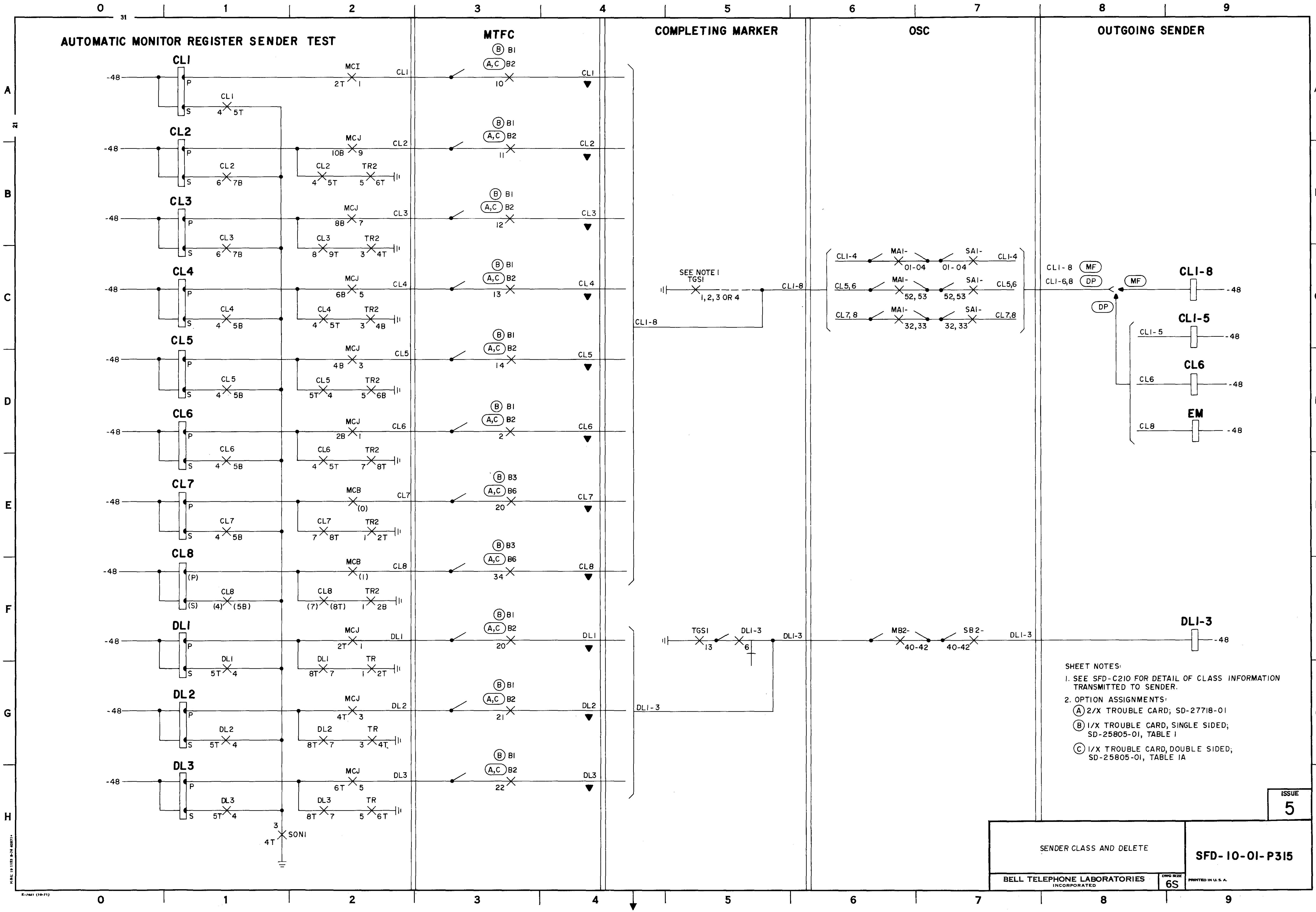
SFD-10-01-P314



SHEET NOTES:

1. SEE SFD-C210 FOR DETAIL OF CLASS INFORMATION TRANSMITTED TO SENDER.
2. OPTION ASSIGNMENTS:
   - Ⓐ 2/X TROUBLE CARD; SD-27718-01
   - Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1
   - Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SENDER CLASS AND DELETE

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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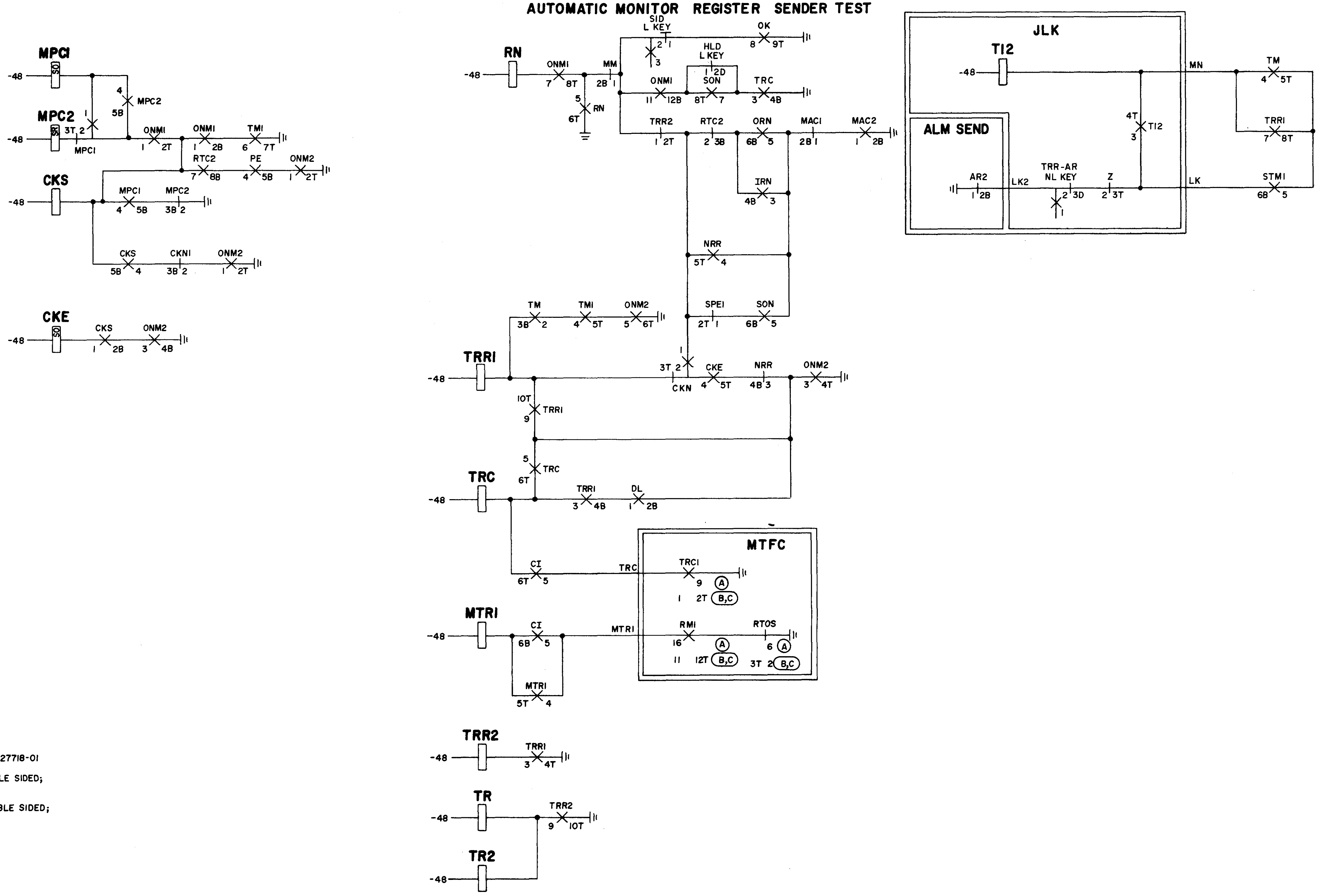
SFD-10-01-P315

AUTOMATIC MONITOR REGISTER SENDER TEST



SHEET NOTES:
1. OPTION ASSIGNMENTS:
- Ⓐ 2/X TROUBLE CARD; SD-27718-01
- Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805-01, TABLE 1
- Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805-01, TABLE 1A

ISSUE
5

SFD-10-01-P316

CONTROL AND RELEASE

6S

BELL TELEPHONE LABORATORIES
INCORPORATED

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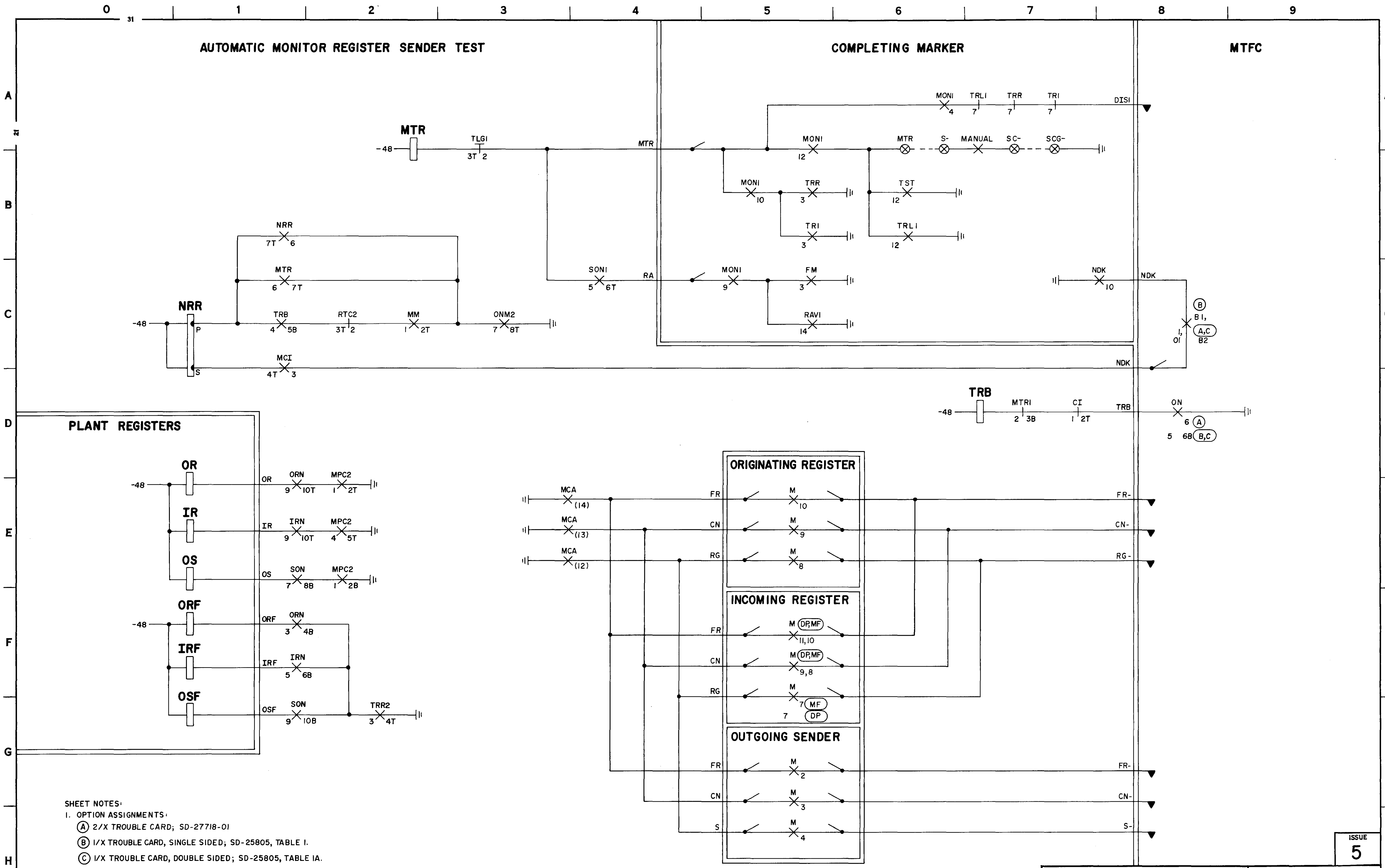
SFD-10-01-P316



SHEET NOTES:

1. OPTION ASSIGNMENTS:

Ⓐ 2/X TROUBLE CARD; SD-27718-01

Ⓑ 1/X TROUBLE CARD, SINGLE SIDED; SD-25805, TABLE I.

Ⓒ 1/X TROUBLE CARD, DOUBLE SIDED; SD-25805, TABLE IA.

ISSUE
5

NO RECORD RELEASE,
TROUBLE RELEASE AND
PLANT REGISTERS

SFD-10-01-P317

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 6S

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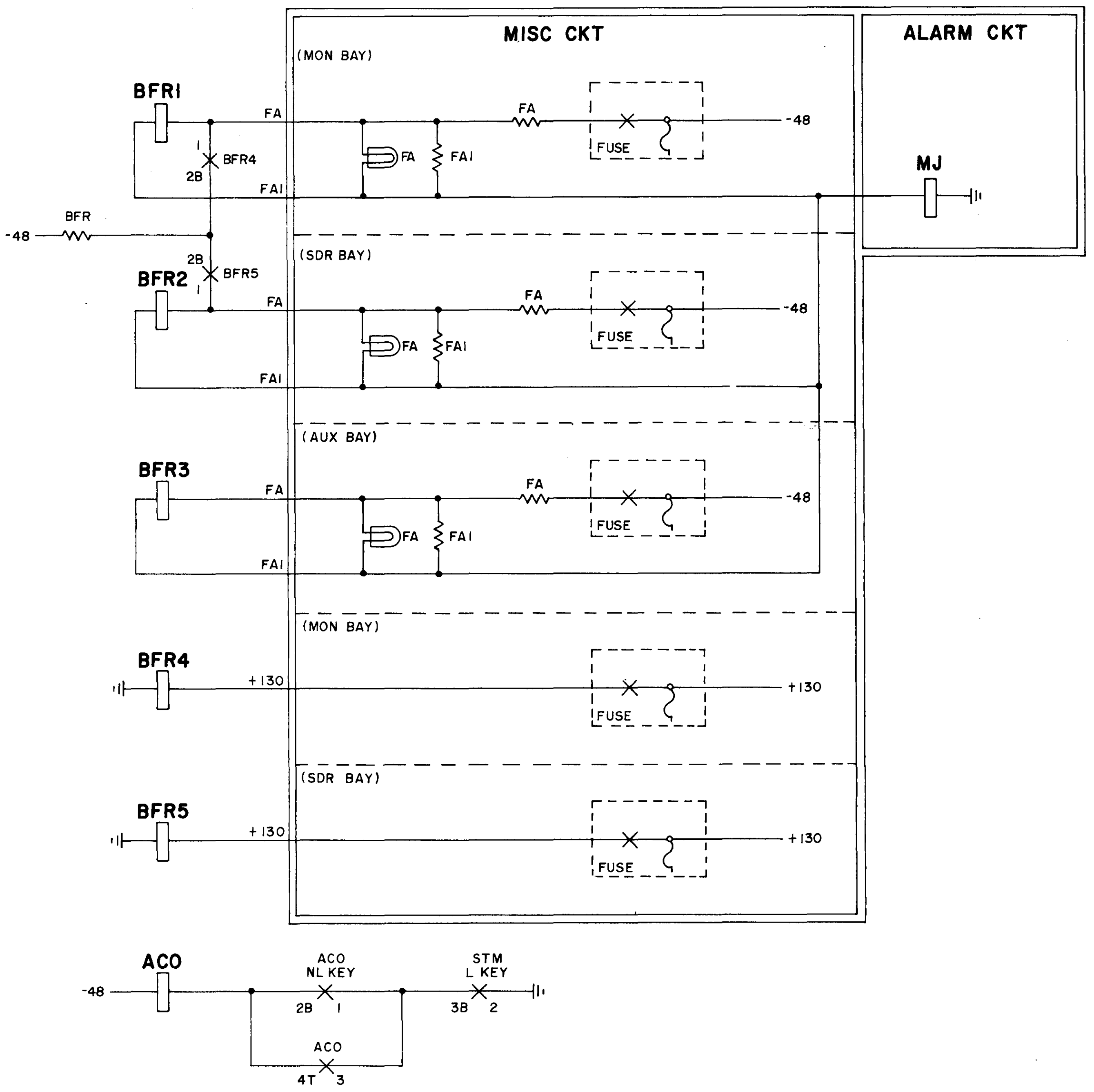
SFD-10-01-P317

AUTOMATIC MONITOR REGISTER SENDER TEST



ISSUE
5

SFD-10-01-P318

BLOWN FUSE ALARM

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DWG SIZE
6S

BELL TELEPHONE LABORATORIES
INCORPORATED